

University of Mississippi

eGrove

Electronic Theses and Dissertations

Graduate School

2010

The Role and Effectiveness of Proactive Behaviors as Coping Strategies in the Stress Process

Laura Anne Williams

Follow this and additional works at: <https://egrove.olemiss.edu/etd>



Part of the [Business Administration, Management, and Operations Commons](#)

Recommended Citation

Williams, Laura Anne, "The Role and Effectiveness of Proactive Behaviors as Coping Strategies in the Stress Process" (2010). *Electronic Theses and Dissertations*. 311.

<https://egrove.olemiss.edu/etd/311>

This Dissertation is brought to you for free and open access by the Graduate School at eGrove. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of eGrove. For more information, please contact egrove@olemiss.edu.

THE ROLE AND EFFECTIVENESS OF PROACTIVE BEHAVIORS AS COPING
STRATEGIES IN THE STRESS PROCESS

A Dissertation
Presented for the
Doctor of Philosophy Degree
in Business Administration
The University of Mississippi

Laura A. Williams

December 2010

Copyright © 2010 by Laura A. Williams
All rights reserved

ABSTRACT

Within the organizational sciences, researchers have examined the stress process in an effort to identify the antecedents and consequences of strain as well as moderating variables which exacerbate or ameliorate the negative effects of strain on individuals and organizations. Limited research has considered the role proactive behaviors may play as neutralizers of the negative consequences of stress. In this study, I seek to expand our knowledge of the role and effectiveness of proactive behaviors within the stress process. Using a job crafting framework, three categories of proactive behaviors (task-oriented, cognitive-oriented, and relationship-oriented) will be examined and are hypothesized to be effective neutralizers of job tension and burnout when matched with similar categories of stressors (task stressors, cognitive stressors, relationship stressors).

Consistent with the hypotheses of the stressor – strain relationships, role overload, and quantitative task demands were found to be positively related to like-category strain (i.e., job tension) and burnout (physical fatigue), and cognitive anxiety and worry were positively related to the like-category dimension of burnout (i.e., cognitive anxiety). While support was found for six of seven hypothesized main effects in the model, none of the hypothesized moderating relationships were supported. Furthermore, only one of these seven hypothesized relationships was in the expected direction. Competing models of non-matched proactive behaviors were tested with mixed support. Implications of these findings, strengths and weaknesses of the current study, directions for future research and post hoc analyses were also discussed.

TABLE OF CONTENTS

List of Tables	v
List of Figures	vii
Chapter I: Introduction.....	1
Chapter II: Literature Review	7
Chapter III: Hypothesis Development	31
Chapter IV: Method	53
Chapter V: Results	62
Chapter VI: Discussion	95
References	107
Appendices.....	131
Appendix A: Summary of Hypothesized Relationships	131
Appendix B: Self-Report Measures	134
Appendix C: Summary of Hypothesized and Competing Models.....	140
Appendix D: Summary of Fit Statistics	142
Appendix E: Competing Path Models	147
Appendix F: Parameter Estimates of Competing Models.....	158
Appendix G: Post Hoc Path Models	162
Appendix H: Fit Statistics and Parameter Estimates of Post Hoc Models	170
Vita.....	174

LIST OF TABLES

Table 1: Sample Characteristics: Sex, Race, and Education	55
Table 2: Means, Standard Deviations, Reliabilities, and Intercorrelations.....	56
Table 3: ICC Values for Variables in the Study	63
Table 4: Model 1 – Task-Oriented Model Parameter Estimates.....	70
Table 5: Model 2 – Task-Oriented Model with Role Overload Parameter Estimates	73
Table 6: Model 3 – Task-Oriented Model with Quantitative Task Demands Parameter Estimates	73
Table 7: Model 4 – Cognitive-Oriented Model Parameter Estimates.....	76
Table 8: Model 5 – Cognitive-Oriented Model with Cognitive Anxiety Parameter Estimates	79
Table 9: Model 6 – Cognitive-Oriented Model with Worry Parameter Estimates	79
Table 10: Model 7 – Relationship-Oriented Model Parameter Estimates	81
Table 11: Multivariate GLM Analysis 1 (Role Overload and Cognitive Anxiety) Results	83
Table 12: Multivariate GLM Analysis 2 (Quantitative Task Demands and Worry) Results	84
Table 13: Parameter Estimates of the Competing Models (Interaction Terms)	91
Table 14: Results of the Current Study.....	94
Table 15: Summary of Hypothesized and Competing Models	141
Table 16: Confirmatory Factor Analysis Measurement Models Fit Statistics.....	143

Table 17: Hypothesized Task-Oriented Models Fit Statistics	144
Table 18: Hypothesized Cognitive-Oriented Models Fit Statistics	144
Table 19: Hypothesized Relationship-Oriented Model Fit Statistics	144
Table 20: Competing Task-Oriented Models Fit Statistics.....	145
Table 21: Competing Cognitive-Oriented Models Fit Statistics.....	145
Table 22: Competing Relationship-Oriented Models Fit Statistics	146
Table 23: Model 8 – Task-Oriented Model (RO) with Positive Framing.....	159
Table 24: Model 9 – Task-Oriented Model (QTD) with Positive Framing.....	159
Table 25: Model 10 – Task-Oriented Model (RO) with Networking.....	160
Table 26: Model 11 – Task-Oriented Model (QTD) with Networking	160
Table 27: Model 12 - Cognitive-Oriented Model (CA) with Negotiating.....	160
Table 28: Model 13 – Cognitive-Oriented Model (Worry) with Negotiating	160
Table 29: Model 14 – Cognitive-Oriented Model (CA) with Networking.....	161
Table 30: Model 15 – Cognitive-Oriented Model (Worry) with Networking	161
Table 31: Model 16 – Relationship-Oriented Model with Negotiating.....	161
Table 32: Model 17 – Relationship-Oriented Model with Positive Framing	161
Table 33: Post Hoc Task-Oriented Models Fit Statistics.....	171
Table 34: Post Hoc Cognitive-Oriented Models Fit Statistics.....	171
Table 35: Post Hoc Relationship-Oriented Model Fit Statistics.....	172
Table 36: Parameter Estimates of the Post Hoc Models.....	173

LIST OF FIGURES

Figure 1: Summary Research Model of the Role of Proactive Behaviors in the Stress	
Process	34
Figure 2: Task-Oriented Research Model	35
Figure 3: Cognitive-Oriented Research Model	36
Figure 4: Relationship-Oriented Research Model	37
Figure 5: Model 1 – Task-Oriented Model Results	69
Figure 6: Model 2 – Task-Oriented Model with Role Overload Results.....	71
Figure 7: Model 3 – Task-Oriented Model with Quantitative Task Demands Results	72
Figure 8: Model 4 – Cognitive-Oriented Model Results	75
Figure 9: Model 5 – Cognitive-Oriented Model with Cognitive Anxiety Results	77
Figure 10: Model 6 – Cognitive-Oriented Model with Worry Results.....	78
Figure 11: Model 7 – Relationship-Oriented Model Results.....	80
Figure 12: Effects of Positive Framing on the Role Overload – Physical Fatigue	
Relationship	90
Figure 13: Effects of Positive Framing on the QTD – Physical Fatigue Relationship	90
Figure 14: Model 8 – Task-Oriented Model (RO) with Positive Framing	148
Figure 15: Model 9 – Task-Oriented Model (QTD) with Positive Framing	149
Figure 16: Model 10 – Task-Oriented Model (RO) with Networking.....	150
Figure 17: Model 11 – Task-Oriented Model (QTD) with Networking	151

Figure 18: Model 12 – Cognitive-Oriented Model (CA) with Negotiating.....	152
Figure 19: Model 13 – Cognitive-Oriented Model (Worry) with Negotiating	153
Figure 20: Model 14 – Cognitive-Oriented Model (CA) with Networking.....	154
Figure 21: Model 15 – Cognitive-Oriented Model (Worry) with Networking.....	155
Figure 22: Model 16 – Relationship-Oriented Model with Negotiating.....	156
Figure 23: Model 17 – Relationship-Oriented Model with Positive Framing	157
Figure 24: Summary Post Hoc Research Model of the Role of Proactive Behaviors in the Stress Process.....	104
Figure 25: Model 18 – Post Hoc Task Model.....	163
Figure 26: Model 19 – Post Hoc Task Model with Role Overload	164
Figure 27: Model 20 – Post Hoc Task Model with Quantitative Task Demands	165
Figure 28: Model 21 – Post Hoc Cognitive Model.....	166
Figure 29: Model 22 – Post Hoc Cognitive Model with Cognitive Anxiety	167
Figure 30: Model 23 – Post Hoc Cognitive Model with Worry	168
Figure 31: Model 24 – Post Hoc Relationship Model	169

CHAPTER I

INTRODUCTION

Job stress is a major concern for businesses, individuals, and researchers alike. Each year, job stress costs businesses in the United States over \$300 billion dollars due to stress-related absenteeism, accidents, reduced productivity, turnover, and increased costs of healthcare, insurance, workers' compensation claims, and legal fees (American Institute of Stress [AIS], 2009). In June of 1983, one cover article of Time magazine reflected a concern for stress felt by Americans and deemed the phenomenon of stress to be "The Epidemic of the Eighties" (Wallis, Thompson, & Mehrtens, 1983). Unfortunately, this concern regarding stress in the workplace was not short-lived. Since then it has continued to grow, and the number of individuals who reported experiences of job stress in the 1990s had doubled from 40% to 80% by 2000 (AIS, 2009).

In the occupational stress literature, researchers have focused an expanding literature on the processes, antecedents, and consequences of stress in addition to the coping strategies used to ameliorate the negative effects of stress. For example, theories have been developed to explain the stress process (stressor – strain – behavior) and include theories such as the Role Theory Approach to Stress (Kahn, Wolf, Quinn, Snoek, & Rosenthal, 1964), Job Demands-Job Control Theory (Karasek, 1979, 1990), Conservation of Resources Theory (Hobfoll, 1989), and Primary and Secondary Appraisal Processes Theory (Lazarus & Folkman, 1984).

Antecedents of job stress are commonly referred to as ‘stressors’ and are the objective and perceived environmental stimuli that necessitate sustained cognitive, emotional, or physical effort (Jones & Fletcher, 1996). Examples of stressors from the job stress literature include role conflict and ambiguity (Kahn et al., 1964), interpersonal conflict (e.g., Keenan & Newton, 1985), role overload (Kahn & Byosiére, 1992), work-family conflict and family-work conflict (Frone, Russell, & Cooper, 1992), and time pressure and situational constraints (e.g., Jex, 1998). More recent research has demonstrated the presence of many additional stressors such as perceived injustice (Fox, Spector, & Miles, 2001), perceptions of organizational politics (Brouer, Ferris, Hochwarter, Laird, & Gilmore, 2006), and felt accountability (Hochwarter et al., 2007).

Negative consequences of stress include impaired individual psychological and physiological health and well-being (Kahn & Byosiére, 1992). Psychological strains have been shown to be job dissatisfaction, tension, and fatigue (e.g., Beehr, Walsh, & Taber, 1976) as well as anxiety and frustration (e.g., Spector, Dwyer, & Jex, 1988). Early research on stress (Cannon, 1932) argued that short-term or low levels of stress are not necessarily problematic; however, long-term or severe stressors have severe negative consequences including compromised biological systems. Physiological problems include increased heart rate, blood pressure, stress hormones, and weakened immune responses (e.g., Hurrell, Nelson, & Simmons, 1998). Negative consequences directly impacting the organization include decreased employee engagement (e.g., González-Romá, Schaufeli, Bakker, & Lloret, 2006) and performance (e.g., Motowidlo, Packard, & Manning, 1986) in addition to increased turnover (e.g., Gupta & Beehr, 1979), absenteeism (e.g., Spector et al., 1988), and counterproductive work behaviors (e.g., Fox et al., 2001). The presence of such consequences has necessitated a continued exploration of coping strategies in order to reduce the negative effects of stress on the individual and organizations.

Coping strategies refer to the cognitive and behavioral attempts an individual makes to minimize stressors (Lazarus & Folkman, 1984). Early work on stress was built on the assumption that individuals adapt themselves to stressful situations and put forth little effort to change the environment in which the stress occurs (e.g., Selye, 1936). However, more recent research suggests individuals do play an active role in changing the environment and/or themselves in an effort to reduce strain (e.g., Folkman & Lazarus, 1980, 1985).

Currently, research continues to focus on identifying individual differences or coping strategies that can be used to neutralize the negative effects of stress. For example, Perrewé and her colleagues found an individual's political skill, a measure of social effectiveness, to successfully minimize negative effects on strain (e.g., Perrewé et al., 2004; Perrewé et al., 2005). Others have found various forms of recovery (e.g., vacations and leisure) from the daily grind of work to effectively reduce subsequent experiences of strain (e.g., Fritz & Sonnentag, 2006; Joudrey & Wallace, 2009).

Another area of research that has begun to emerge in the organizational sciences examines the importance of proactive behaviors in constantly changing work structures associated with more flexible, decentralized, and boundaryless organizations (e.g., Fritz & Sonnentag, 2009). Proactive behavior is defined as “anticipatory action that employees take to impact themselves and/or their environments” (Grant & Ashford, 2008, p. 8). They include behaviors such as seeking feedback, actively adapting to new environments, expanding roles, and building social networks (e.g., Grant & Ashford, 2008).

In addition to the proactive behaviors listed above, Crant (2000) included proactive coping as an additional proactive behavior. Aspinwall and Taylor (1997) suggested that individuals engage in proactive coping by taking actions designed to reduce strain prior to

experiencing a potentially stressful situation and found positive results of its effectiveness for reducing stress. Despite such benefits, the use of proactive coping mechanisms has generally been ignored in the stress literature (Crant, 2000).

The present study will consider the use and effectiveness of proactive behaviors as coping mechanisms in the stressor-strain relationship. Current research is sparse in this area and where it does exist, researchers have considered the relationships between job stressors, proactive behavior, and/or stress related outcomes with a very isolated approach, focusing on a single proactive behavior. For example, Fritz and Sonnentag (2009) considered the relationship between two specific job stressors (e.g., time pressures and situational constraints) and taking charge, one specific type of proactive behavior. Similarly, several other studies have only considered the role personal initiative serves as a way to minimize negative effects of stressors (e.g., Fay & Sonnentag, 2002; Sonnentag, 2003). This isolated approach provides a limited perspective of the complex relationship between proactive behaviors and stress-related predictors and outcomes.

The findings of this stream of research suggest a relationship exists between certain job stressors and specific proactive dispositions and behaviors; however, there are still many questions regarding the linkages between these constructs (Fritz & Sonnentag, 2009). Little, if any, research has been done to examine multiple proactive behaviors simultaneously, specifically for the purpose of determining their effectiveness of neutralizing job stress and its consequences.

In this project, I suggest proactive behaviors affect the stress process (stressor-strain-behavior) as either problem-focused (e.g., physical changes to task and/or relationship boundaries) or meaning-focused coping mechanisms (e.g., cognitive changes to boundaries) and will consider the effectiveness of multiple proactive behaviors in neutralizing stress-related

outcomes. More specifically, I will consider the effectiveness of three forms (or categories) of proactive behaviors, which are directed towards altering task, relationship, and cognitive boundaries of work, as either problem-focused coping mechanisms or as meaning-focused coping mechanisms.

This study makes several contributions to both the stress and proactive behavior literatures. First, while multiple proactive behaviors should be included in one study, past research has not provided a theoretical way to choose behaviors that should be considered in a single study. I suggest the three categories Wrzesniewski and Dutton (2001) proposed in their job crafting process (i.e., task, relationship, and cognitive orientation) can serve as a framework for choosing multiple categories of proactive behaviors in a single study, thereby, taking a first step in our understanding of how proactive behaviors, in general, affect the stress process.

Past research has been somewhat inconclusive when trying to predict relationships between stressors and coping mechanisms as different types of stressors and coping strategies have been lumped together in individual studies. Another contribution of this study is its focus. My research takes a more focused approach by matching three types of stressors, proactive behaviors and strain outcomes along three categories (with either task, cognitive, or relationship orientation) while considering how proactivity may play a key role in coping with stress.

Consistent with the matching principle (Viswesvaran, Sanchez, & Fischer, 1999) and the triple match principle (de Jonge & Dormann, 2006), I hypothesize the relationship between stressors and strain of the same category will be more effectively neutralized when a coping mechanism of the same category is used. In other words, stressors, coping strategies, and strains that are aligned conceptually will be more effective in the neutralization of stress. Hypothesized relationships, of

like-categories, are expected to yield greater neutralization than when there is a mismatch between categories.

The use of this focused approach is expected to yield stronger, more consistent and generalizable findings than if a random sample of stressors, proactive behaviors, and strains had been chosen without consideration of categories or types of variables. To further capitalize on the benefits of a focused approach, a primary motivation of this study design is its consideration of bandwidth of both the predictor and criterion variables in addition to the relevance of their relationship with one another. A long-debated research topic within fields such as psychometrics and personality has been the bandwidth-fidelity topic (e.g., Cronbach, 1960; Cronbach & Gleser, 1965; Hogan, Hogan & Roberts, 1996; Ones & Viswesvaran, 1996; Schneider et al., 1996). The general conclusion of this debate suggests predictive validity is increased when matching bandwidth of the predictor and criterion variables as well as ensuring they are relevant with respect to their relationship to each other (Hogan et al., 1996). Inconsistent results of past studies may be due to ignoring the bandwidth-fidelity consideration.

In this study, I will examine the relationship of individual stressors and proactive behaviors with narrow components of strain and burnout in order to maximize predictive validity. This is the first study within the stress literature to incorporate bandwidth when hypothesizing the effects of coping mechanisms on strain and burnout.

CHAPTER II

LITERATURE REVIEW

Consistent with previous research on workplace stress (e.g., Perrewé et al., 2004; Podsakoff, LePine, & LePine, 2007), the current study conceptualizes the stress process as an initial stressor leading to strain and, ultimately, burnout. I will provide an overview of the stress process, as explained through prominent stress theories and will consider the effectiveness of proactive behaviors as a resource used in the stress process. This chapter includes an examination of the theoretical foundations of the stress process and proactive behaviors in order to develop specific hypotheses designed to answer the central research question of whether specific proactive behaviors neutralize the negative effects of like-category stressors on like-category strain and/or burnout.

Theoretical Perspectives of Stress

In an effort to gain an adequate understanding of the stress process, a variety of theories have been developed. Four of the most prominent theories most salient in explaining the use of proactive behaviors as coping mechanisms and their role within the stress process are described (i.e., Job Demand-Control Model, Job Demands-Resources Model, Conservation of Resources Model, and Transactional Model).

Job Demands Control Model

One of the most influential theories explaining the relationship between work stress and health is Karasek's (1979) Job Demand-Control (JDC) Model (e.g., Bakker & Demerouti, 2007; Van Der Doef & Maes, 1999). Karasek (1979) proposed a model of stress based on joint effects of demands and control. His model was primarily based on two predictions. First, he suggested a positive relationship between job demands and job strain. Second, he suggested that high job control (i.e., decision latitude) moderates the relationship between demands and strain such that if individuals have the ability to cope with such demands, the relationship between demands and strain will be minimized. According to Karasek's model, an individual has job control when he/she has the authority to decide how to most appropriately meet job demands. Karasek suggests demands are not necessarily problematic; however, when coupled with a lack of control needed to cope with such demands, they can lead to negative outcomes such as fatigue, exhaustion, mental strain, and frustration.

Empirical Evidence. Empirical results of this model suggest demanding jobs (those characterized with work overload and time pressure) with little control lead to increased levels of strain and job dissatisfaction. More specifically, strain in the forms of exhaustion, depression, anxiety, nervousness, insomnia or disturbed sleep, and trouble waking up in the morning have been shown as consequences in this model (Karasek, 1979). Consistent results were found in samples representing both the United States and Sweden (Karasek, 1979). Karasek (1979) also found that an individual's ability to exercise judgment about how work is conducted led to reduced experienced strain. Support of the JDC model has been mixed. For example, Schnall and colleagues (1990) found a relationship between job demands and cardiovascular disease and myocardial infarction, and other studies found job demands to be positively related to systolic

and diastolic blood pressure (e.g., Fox, Dwyer, Ganster, 1993). Other research has not been as supportive. One such study did not find hypothesized cardiovascular and blood pressure outcomes (e.g., Albright, Winkleby, Ragland, Fisher, & Syme, 1992). Ganster and Fusilier (1989) suggested evidence is weak for the moderating effects of control on the demands-strain relationship. The one-sided support of this model has led to criticisms of the JDC (e.g., Bakker & Demerouti, 2007; DeJonge, & Kompier, 1997; Van Der Doef & Maes, 1999).

Extensions of the JDC Model. The mixed support of the JDC model is indicative of unmeasured variables which may also impact the proposed relationships. The JDC model has been extended several times to include moderating variables such as participation and self-efficacy. Karasek and his colleagues extended the JDC model by considering the effects of social support on the process and found that two types of support (emotional and instrumental) received from both coworkers and supervisors have a buffering effect on the relationship between job-stressors and symptoms of mental strain (Karasek, Triantis, & Chaudhry, 1982).

Karasek and Theorell (1990) recognized the importance of social interactions in the stress process and expanded their original model to include social support. They noted control and social support are almost always linked. Consistent with the work of Karasek and his colleagues (1982), two types of social support noted were socioemotional support, which minimizes psychological strain, and instrumental social support, which comes in the form of help from others with work assignments or additional resources provided by colleagues.

In addition to the benefits of support, Karasek (1990) considered the joint effects of participation and control in the workplace and found supporting evidence that increased levels of participation and control at work could reduce illness experienced by full-time workers, including coronary heart disease. He also found job changes among white collar jobs are more

likely to involve reduced control than increased control, especially among older workers and women. Karasek found employees were able to gain control in their jobs by increasing their level of influence over job changes. If an employee was able to influence a job, but these changes were not able to be maintained, the effects were negative and were more detrimental than if no initial changes were made.

Due to the inconsistent support of the JDC model, Schaubroeck and Merritt (1997) considered the moderating effects of self-efficacy, an individual difference variable measuring one's beliefs "in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands" (Wood & Bandura, 1989, p. 409). They found that the JDC model was supported, but only for those individuals with high self-efficacy. More specifically, they found individuals high in self-efficacy with high levels of control, even when experiencing high demands, experienced lower levels of strain (i.e., blood pressure). However, when individuals were low in self-efficacy, even with high control and high demand, they experienced negative health consequences. Schaubroeck and Merritt (1997) concluded that improving self-efficacy may be as important as raising control when efforts are made to reduce consequences of job stress.

While the JDC model has provided an influential foundation, Bakker and Demerouti (2007) suggest the JDC model has been limited to the predictors of work overload and time pressure, moderators of decision latitude (as well as support, participation, and self-efficacy in the extended models), and negative outcome variables of strain and poor health. They have developed a more flexible, yet similar, model which can be used to explain relationships in the stress process, the Job Demands-Resources Model.

Job Demands-Resources (JD-R) Model

Bakker, Demerouti, and their colleagues (e.g., Bakker & Demerouti, 2007; Bakker, Demerouti, & Schaufeli, 2003; Demerouti, Bakker, Nachreiner & Schaufeli, 2001), proposed a model of work stress based on the assumption that every job is likely to have specific stress risk factors, which can be categorized as either job demands or job resources. Job demands are the organizational, physical, and social elements of the job that require an individual to sustain physiological and/or psychological (cognitive and/or emotional) exertion. Alternatively, job resources buffer job demands, and/or assist individuals in achieving goals and/or enhancing growth and development (Demerouti et al., 2001). Job resources may be physical, psychological, social, or organizational elements of the job and may include constructs such as support, feedback, or autonomy (Bakker & Demerouti, 2007).

In addition to the assumption that job demands and resources are present in every job, another benefit to the JD-R model is its inclusion of both negative and positive organizational outcomes, which are the result of two processes: job strain and motivation (Bakker & Demerouti, 2007). Job strain resulting from continuous job demands may drain employee's resources and may lead to exhaustion and/or health problems (e.g., Bakker & Demerouti, 2007). Alternatively, job resources have the potential to motivate employees and are likely to lead to increased performance, employee engagement, and low cynicism. Job resources may be intrinsically motivational by nurturing individual career growth, learning, and development; they may also be extrinsically motivational by buffering negative effects of stressors and/or achieving work goals (Bakker & Demerouti, 2007).

Consistent with the JDC model, the JD-R model proposes that job resources neutralize the negative effects of job demands on strain. While it is consistent with the JDC model, the

JD-R model extends Karasek's model by proposing various job resources can neutralize negative effects of various job demands, and these resources and demands are not limited to those originally proposed in the JDC model (Bakker & Demerouti, 2007).

Finally, the JD-R model proposes that job resources may lead to motivation or work engagement when job demands are high, as resources achieve motivational potential within the context of high job demands (Bakker & Demerouti, 2007). This is consistent with *eustress*, representing the notion that stress can be beneficial and yield positive effects and improved health (e.g., Selye, 1973).

Empirical Support. The hypotheses of the JD-R model (dual process approach leading to positive and negative outcomes, buffering effect of job resources, and the importance of job resources in the context of high job demands) have been empirically tested, and supportive evidence has been found for each. For example, Bakker and his colleagues found support for the dual process approach with a sample of call center telecom employees in a Dutch company (Bakker et al., 2003). More specifically, they found job demands such as work pressure, computer problems, and emotional exhaustion to be related to health problems and sickness-related absenteeism. Additionally, job resources such as social support, coaching, and performance feedback were positively related to dedication and organizational commitment, which were related to turnover intentions. Hakanen, Bakker, and Schaufeli's (2006) study of teachers in Finland yielded consistent evidence and found burnout to be a mediator of job demands and poor health; whereas, work engagement acted as a mediator between job resources and organizational commitment.

Evidence has also been found in support of the moderating effect of job resources in the demands and well-being relationship. Bakker and colleagues (2005) studied employees in a

higher education institution and found high levels of demands (e.g., work overload, physical and emotional demands, work-home interference) were not related to burnout when employees experienced job resources of autonomy, feedback, social support, or high-quality relationships with supervisors (Bakker, Demerouti, & Euwema, 2005). Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) reported similar findings in two home care organizations. In this study, four job demands (workload, emotional demands, emotional dissonance, and organizational changes) and four resources (autonomy, support, supervisory coaching, and opportunities for professional development) were tested. In situations where job demands and resources were both highest, experiences of burnout were low. Whereas when high job demands were coupled with low resources, high levels of exhaustion and cynicism (dimensions of burnout) were experienced.

Support for the hypothesis that resource gain increases in importance in the context of high job demands has also been supported. In a sample of dentists in Finland, Hakanen, Bakker, and Demerouti (2005) found when qualitative workload (job demand) was high, an increase in professional skills (job resource) was positively related to increases in work engagement. These findings were consistent with Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) who demonstrated that job resources of supervisor support, innovation, organizational climate, and appreciation acted as buffers for teachers when dealing with difficult students.

The JD-R model provides a framework for considering simultaneous effects of job resources and demands and their subsequent effects on positive and negative organizational outcomes. The importance of resources noted in the JD-R model is built upon the foundations provided by Hobfoll (1988, 1989) in his development of the Conservation of Resources Theory.

Conservation of Resources (COR) Model

Conservation of Resources Theory (COR) is based on the notion that individuals seek to protect, retain, and build resources, and they are most threatened by either the actual or potential loss of resources (Hobfoll, 1989). Resources are a key component of one's ability to resist stress, and they include objects, personal characteristics, energies, and conditions (Hobfoll, 1989).

Hobfoll (1988) suggested stress is "a reaction to the environment, in which there is either: (a) *the threat of a net loss of resources*, (b) *the net loss of resources*, or (c) *the lack of resource gain following investment of resources*" (p.25).

According to COR theory (Hobfoll, 1989), object resources, such as a home or equipment, are tangible assets that have value or rarity. Condition resources include marriage, tenure, and seniority. The degree to which conditions are sought after determine whether or not they are considered resources. Personal characteristics are individual differences or personality traits which may help resist experiences of stress. Energy resources are those which can be used to acquire other resources, and they include knowledge, time, and money. Hobfoll (1989) also explains that social support does not exclusively fall into any one of the four categories; however, it can be considered a resource to the degree it helps acquire and maintain other valued resources.

COR suggests people have both a natural and learned desire to preserve both the quantity and quality of resources and to ensure these resources are not jeopardized (Hobfoll 1988, 1989, 2002). Acquiring and managing resources is motivating, and such activities become more important when resources are lost or threatened. Individuals can retrieve and use their resources in order to prevent either a threat or loss of resources (Hobfoll & Shirom, 2000). Hobfoll (2001)

later expanded this proposition and argued that events are only stressful to the degree that demands exceed resources.

Hobfoll and Shirom (2000) clarified four points made to Hobfoll's early versions of COR. First, in order to prevent a loss of resources, individuals need to accumulate and utilize resources. Second, individuals who have ample resources are more likely to accrue resources and less likely to lose them. Third, those with limited resources are more likely to lose the resources they do possess. Fourth, those with greater resource pools are more likely to risk them if they perceive a potential resource gain.

Empirical Evidence. COR has been used in a variety of stress-related studies. It has been used to explain how individual differences can be used to acquire and protect resources. For example, Ferris and his colleagues (2007) suggest COR explains how political skill can accomplish such objectives through one's social astuteness and ability to network. Similarly, Zellars, Perrewé, Hochwarter, and Anderson (2006) used COR to explain how personality traits can be considered to be resources. Additionally, COR has been used in understanding negative consequences of the stress process. For example, COR has been used to explain burnout in the workplace (e.g., Halbesleben, 2006).

COR theory suggests resources can be either objective or subjective based on one's perception (Hobfoll, 1989). For example, Hobfoll (1989) suggested one's interpretation of threats as challenges can aid in resource conservation and argued that many of the stressors people experience daily could be reinterpreted as challenges. This idea is consistent with re-appraisal factor of the Transactional Model (Lazarus & Folkman, 1984).

Transactional Model

According to Lazarus and Folkman (1984), stress is described as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (p. 19). They argue that perceptions of demands and resources determine whether the person-environment relationship is stressful and suggest it is not possible to predict experiences of stress objectively because each person’s experiences of stress are subjective. Further, they posit that consequences of an inability to cope with stressors must be perceived as salient for stress to be experienced. The idea that stress is a relationship between the environment and the person is crucial to the transactional model’s explanation of why individuals experience stress. Lazarus (1994) suggested stress is dependent upon a subjective evaluation of the balance between environmental demands, resources, and constraints as well as the individual’s ability to manage this balance.

In order to determine whether or not an event is salient to an individual’s well-being, the event should be appraised (Folkman, Lazarus, Gruen, & DeLongis, 1986; Lazarus & DeLongis, 1983). The transactional model (Lazarus & Folkman, 1984) suggests two appraisal processes: primary appraisal and secondary appraisal. In primary appraisal, a person determines the significance of the event, in terms of the harm or benefit it will bring, and the likely consequences to his or her well-being. The situation is appraised as (1) irrelevant if there are no consequences for well-being, (2) benign-positive if there are positive implications for one’s well-being, and (3) stressful if negative consequences are likely. Stressful appraisals are categorized as a loss, a threat, or a challenge. Losses occur if resources have been harmed or the resource has been depleted; whereas, threats refer to anticipatory harm to or depletion of the resources.

Situations which are defined as challenges are those which can have a positive outcome (i.e., potential gain or growth) even though they are stressful.

Secondary appraisal occurs if one determines the situation is important and is the process one uses to determine what, if anything, can be done to cope with the situation. It is an evaluative process which considers the available coping options, the probability the coping strategy will lead to a positive outcome, and one's ability to effectively cope with the situation (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) define coping as the cognitive and behavioral efforts to manage taxing or excessive demands, which may either be internal or external.

Coping strategies used in the secondary appraisal process fall into two main categories of emotion-focused or problem-focused strategies (Folkman & Lazarus, 1980). Emotion-focused coping strategies attempt to deal with the emotional responses to the stress and are usually seen in the form of defensive mechanisms (such as avoidance or minimizing) and in cognitive reappraisal (where evaluation is reassessed). Problem-focused strategies are designed to change the situation, the consequences or the self. Typically, problem-focused coping occurs when conditions are amenable to change, and emotion-focused coping is used when nothing can be done to minimize potential negative conditions (Lazarus & Folkman, 1984).

Lazarus (2001) posited appraisal theory suggests that people constantly evaluate their relationship with the environment, taking into account its impact on personal well-being. This constant evaluation introduces the need for reappraisal (Lazarus, 1993, 1994; Lazarus & Folkman, 1984), which is a feedback loop allowing an individual to continuously re-evaluate the stressor or coping strategy in response to changes in the environment. Individuals who engage in positive reappraisal make an effort to create optimistic meaning by focusing on personal growth or religion when coping with the situation (e.g., Folkman, Lazarus, Dunkel-Schetter, DeLongis,

& Gruen, 1986). Examples of reappraisal include comments such as “I came out of the experience better than when I went in,” “I was inspired to do something creative,” “[I] found new faith,” or “I changed something about myself” (Folkman Lazarus, Dunkel-Schetter et al., 1986, p. 996).

Each of the four theoretical perspectives addressed contributes to our understanding of different aspects of the stress process and together provide a theoretical foundation for the proposed research framework. Extensions of the JDC model (e.g., Karasek & Theorell, 1990) and the JD-R model (Bakker & Demerouti, 2007) with their focus on resources such as support, autonomy and feedback as neutralizers of stress suggest proactive behaviors can be instrumental in obtaining such resources. COR defines what creates a stressful experience and also supports the notion that proactive behaviors can be resources, as they can be used to resist stress. Finally, Lazarus and Folkman’s transactional model provides the foundation for understanding the stress process is subjective and is dependent upon the relationship between an individual and his/her environment. In this research, I will focus specifically on stress experienced in the workplace.

The Stress Process

Stressors

Environmental demands are commonly referred to as stressors. Stressors have also more broadly been defined as stimuli that initiate a stress response (LePine, Podsakoff, & LePine, 2005, p. 764). Common workplace stressors include job demands such as work overload, emotional demands, role ambiguity, interpersonal conflict, and work-family conflict. As individuals continually face stressors and experience stress, they are at risk for experiencing burnout.

Burnout

Burnout is a psychological response to chronic stressors that occurs when the physical, emotional, and cognitive resources are depleted (Hobfoll & Shirom, 2000). According to the Shirom-Melamed Burnout Measure (SMBM; Melamed, Shirom, Toker, Berlinger, & Shapira, 2006), three dimensions of burnout are physical fatigue, emotional exhaustion, and cognitive weariness. *Physical fatigue* refers to feelings of low energy and tiredness when completing daily work tasks. *Emotional exhaustion* refers to feelings that one does not have energy to devote to interpersonal relationships at work. *Cognitive weariness* refers to feelings of reduced mental agility and compromised ability. COR theory was used in developing the SMBM, and it is suggested that the SMBM is a more theoretically valid measure than Maslach Burnout Inventory, which has historically been the commonly used measure of burnout (Shirom & Melamed, 2006).

Individuals who experience burnout are likely to experience low energy, a lack of motivation, negative feelings towards themselves or their work, depression, and tend to withdraw from interactions with others (e.g., Maslach & Jackson, 1984; Maslach & Schaufeli, 1993; Zellars & Perrewé, 2001). A central feature distinguishing symptoms of burnout is a general feeling of hopelessness (Zellars, Perrewé, & Hochwarter, 1999). Consequences of burnout are likely to affect individuals and organizations alike. At the individual level, outcomes include reduced job satisfaction, organizational commitment, and productivity as well as increases in absenteeism, turnover intentions, and actual turnover (e.g., Bakker, Demerouti, & Schaufeli, 2003; Leiter & Maslach, 1988; Maslach & Jackson, 1984; Maslach & Schaufeli, 1993; Schaufeli & Bakker, 2004; Zellars & Perrewé, 2001). Some studies have shown a significant negative relationship between burnout and job performance (e.g., Wright & Cropanzano, 1998); however, this relationship has not been consistent (see Halbesleben & Buckley 2004 for a full review).

Burnout also leads to financial loss, increases in number of accidents at work, and lower quality patient care in healthcare organizations (e.g., Demir, Ulusoy, & Ulusoy, 2003).

Burnout is a long-term strain construct and occurs as a result of exposure to chronic stressors (Halbesleben & Buckley, 2004). Research has identified several factors that exacerbate experiences of burnout among individuals. These factors include unmet expectations (Van Dierendonck, Schaufeli, & Bunnk 2001) and lack of support (Janssen Schaufeli, & Houkes, 1999). Subsequent research has considered the effect of social support on burnout (e.g., Bond & Bunce, 2003; Halbesleben, 2006; Zellars & Perrewé, 2001). Halbesleben (2006) conducted a meta-analysis examining the importance of social support as a resource and concluded that it effectively neutralizes strain by moderating the relationship between workplace demands and job burnout. A growing body of literature has focused on the effectiveness of coping strategies, such as social support, as effective neutralizers of stress and burnout.

Coping

Coping has been defined as behaviors and thoughts used to minimize, reduce, deal with, or manage demands, both internal and external, perceived as stressful (Folkman & Lazarus, 1985; Lazarus & Folkman, 1984). Recent research has suggested coping is a complex process and its effectiveness is influenced by the environment, demands and resources, as well as individual differences such as personality and an individual's appraisal of stress and coping resources (Folkman & Moskowitz, 2004). A common theme in the coping literature is a lack of consensus regarding what activities are coping mechanisms (Beehr, Johnson, & Nieva, 1995). Therefore, coping can be used to describe a variety of activities, beliefs or behaviors. Behaviors such as meditation (Frew, 1974), relaxation training (e.g., Ganster, Mayes, Sime, & Tharp, 1982), and religiosity (e.g. Beehr et al., 1995) have been considered as coping mechanisms.

As a variety of coping strategies do exist, researchers have clustered coping strategies, either theoretically or empirically, in order to discuss findings across studies. Folkman and Lazarus (1980) introduced two theoretically derived types of coping mechanisms: problem-focused and emotion-focused. Emotion-focused coping strategies attempt to deal with the emotional responses to the stress; whereas, problem focused strategies are designed to change the situation, consequences or the person (e.g., Folkman & Lazarus, 1980; Moos & Billings, 1982). A third type, meaning-focused coping, has also been included (Folkman & Moskowitz, 2004). Through meaning-focused coping, individuals use cognitive strategies to manage the meaning of the situation in order to overcome a stressful situation (e.g., Folkman & Moskowitz, 2004). These three categories are similar to another three-factor typology conceptualized by Billings and Moos (1981): Active Cognitive (e.g., focusing on the positive aspects), Active Behavioral (e.g., actively engaged in behaviors to overcome the situation), and Avoidance (e.g., escaping the situation through food, drugs, and/or alcohol). Categories that have been empirically derived include the problem-focused, emotion-focused, and meaning-focused conceptualizations and also include social coping. Through social coping, individuals find emotional or instrumental support when managing stressful situations.

One of the problems with research on coping is its lack of consistent support of hypotheses. For example, in a review of the coping literature, Folkman and Moskowitz (2004) noted that active coping strategies have been found to be associated with negative outcomes as well as positive outcomes and sometimes have no relationship with expected outcomes. The relationship between coping mechanisms and their expected outcomes most often depends on the situational characteristics. Several researchers have begun to explore different avenues of coping

such as proactive coping (Aspinwall & Taylor, 1997), religious coping (e.g., Beehr et al., 1995), and emotion regulation (Eisenberg, Fabes, & Guthrie, 1997; Gross, 1998).

Proactive Behaviors and the Stress Process

The current section of the paper examines the role of proactive behaviors in the stress process. Little research, to date, has examined the role proactive behaviors may play in the stress process and their effectiveness as neutralizers on its negative consequences. This research furthers a comprehensive knowledge of the function and effectiveness of proactive behaviors in the stress process.

Established research has documented the prevalence of stress in the workplace and its negative consequences affecting both organizational and individual well-being, and concern with finding solutions to neutralize its harmful effects has grown. Over the past several years, researchers have given priority to finding effective ways to neutralize the negative effects of job stressors and strain (e.g., Fritz & Sonnentag, 2006; Joudrey & Wallace, 2009; Perrewé et al., 2004; Perrewé et al., 2005). Recently, these efforts have begun to consider the advantages of individual proactivity, although this approach has been isolated. Researchers have considered a single proactive behavior (e.g., taking charge, personal initiative) or an individual proactive disposition (i.e., proactive personality) in single studies. As a result, our knowledge of proactive behaviors is disjointed and incomplete.

Our fragmented knowledge of proactive behaviors, in general, has contributed to a limited understanding of the advantages and disadvantages of using or promoting the use of proactive behaviors in the workplace (Grant & Ashford, 2008). An opportunity to develop the research stream of proactive behaviors lies within the integration of our knowledge of such

behaviors and identifying benefits and consequences of using such behaviors in the workplace. This study represents a first step in beginning to integrate multiple proactive behaviors and considering their effectiveness when used as coping mechanisms in the stress process.

Our understanding of individual behavior within a work context has shifted from considering an individual to be a passive worker responding to his or her environment to that of a proactive employee planning for the future and influencing the environment. For example, early versions of role theory viewed employees to be passive role takers, simply accepting the role expectations given to them (Katz & Kahn, 1966) instead of as role makers who take an active role in negotiating what is expected of them (Katz & Kahn, 1978). Even theories of motivation (expectancy theory, equity theory, need theories, and goal-setting theory) held similar passive views of individuals within a workplace and assumed workers responded to rewards, outcomes, or fairness of treatments (Grant & Ashford, 2008).

While a passive view of the worker has been evident over the years, historical roots of proactivity in the workplace should not be overlooked. The earliest discussions of individual proactive behaviors can be seen in the works of March and Simon (1958) and Thompson (1967). March and Simon (1958) began to consider the decisions made by individuals within organizations. They suggested “performance programs” in which some decisions are routine in nature, with prescribed decisions; however, others allow for more discretion and individual proactivity in solving problems and handling uncertainty. Thompson (1967), in a discussion of organizational structure, suggested that individuals behave rationally according to expectations because of prescribed solutions with no alternatives created by the structure. Thompson made inferences to the notion that individuals, without such limiting structure, may not behave in ways that are consistent with prescribed expectations denoted by the organization’s structure.

Katz and Kahn (1978) recognized that employees, when having latitude to do so, choose their own activities they engage in at work, implement varying methods and work styles, and participate in activities outside the formal requirements of their job. Ashford and Cummings (1983) theorized that individuals are active participants in seeking feedback, and Ashford and Cummings operationalized feedback seeking as an individual resource which enabled them to gain information necessary for the accomplishment of objectives and organizational survival instead of simply waiting on others to give them the necessary information.

More recently, researchers have begun to recognize the proactive role employees take in managing their roles and careers and agree that proactive behaviors are becoming increasingly important as the nature of work is changing and the workplace is becoming more dynamic (Crant, 2000; Parker, Williams, & Turner, 2006; Seibert, Kraimer & Crant, 2001). Job structure is evolving to become more team-oriented and decentralized, and individual careers have fewer boundaries. New demands are being placed on organizations to be flexible, innovative, and to become globally competitive, and the need for employees to respond proactively has become increasingly important (e.g., Aragon-Correa, 1998; Fritz & Sonnentag, 2009). Examples of proactive behaviors include feedback seeking (e.g., Ashford & Cummings, 1983, 1985), taking charge (Morrison & Phelps, 1999), expanding roles (e.g., Parker, Wall, & Jackson, 1997; Saks & Ashforth, 1996), implementing ideas and solving problems (Parker et al., 2006), and building social networks (e.g., Morrison, 2002).

Proactive Personality

Recent interest in proactivity re-emerged in the 1990s as Bateman and Crant (1993) introduced a dispositional approach to proactive behaviors by developing proactive personality in organizational research and defined it as a tendency to change one's environment. Proactive

personality is described by behaviors such as seeking opportunities for change, taking action, showing initiative, and persisting until the desired change occurs (Bateman & Crant, 1993; Crant, 1995, 2000). Those low in proactive personality rely on others to take action, ignore opportunities for change, and allow situations to control them instead of taking action themselves (Bateman & Crant, 1993; Crant, 1995, 2000).

Personal Initiative

Proactive personality captures a dispositional approach to proactivity, while Frese and his colleagues developed another perspective termed *personal initiative* (PI), which is defined as proactive, self-starting work behavior in persistent pursuit of a goal, even when faced with challenges and obstacles (Frese & Fay, 2001). Personal initiative is a proactive concept and requires individuals to act in advance instead of merely responding to environmental factors (e.g., Frese, 2006; Frese & Fay, 2001). More specifically, it is characterized by five aspects of the behavior: “(1) it is consistent with the organization’s mission, (2) has a long term focus, (3) is goal directed and action oriented, (4) is persistent in the face of barriers and setbacks, and (5) is self-starting and proactive” (Frese, Kring, Soose, & Zempel, 1996, p. 38).

In their review of the proactive behavior literature, Grant and Ashford (2008) criticized PI for its inability to apply to all proactive behaviors. More specifically, they posited PI only includes pro-company behaviors, which excludes destructive behaviors directed at harming others or organizations or self-serving behaviors with intentions to benefit only one’s self (Grant & Ashford, 2008). They suggest a more integrative approach should be taken to gain a complete picture of proactive behaviors.

Proactive Work Behavior

Grant and Ashford (2008) began to develop an integrated theory building from the work of others previously cited and suggested two distinct characteristics of proactive behavior: *acting in advance* and *intended impact*. For a behavior to be considered proactive, it must be an anticipated, deliberate, calculated, and forward thinking response to a future event (e.g., Frese & Fay, 2001; Grant & Ashford, 2008). Additionally, a proactive behavior is necessarily focused on change and making a difference in the environment or within one's self (e.g., Bateman & Crant, 1993; Crant, 2000, Grant, 2007; Grant & Ashford, 2008). In summary, employees engage in proactive coping by anticipating and visualizing a desired future outcome and evoke change in the situation to achieve the outcome (e.g., Apsinwall & Taylor, 1997).

Additionally, proactivity is not limited to behaviors that are part of one's in-role expectations, but can be applied to both in-role and extra-role prescriptions (Grant & Ashford, 2008). It has also been suggested that proactive coping is not limited to a unique set of behaviors (e.g., feedback seeking or taking charge), but is a process which can be applied in many situations through anticipating, planning, and persisting until the desired change occurs (Greenglass, 2005), which is consistent with Grant and Ashford's recent discussion of the process approach to proactivity.

Process Approach. Grant and Ashford's (2008) process approach focuses on three core processes: *anticipation*, *planning*, and *action directed toward future impact*. Through *anticipation*, the proactive process is initiated. Anticipation involves imagining or visualizing an event, object or person which may exist at a future point in time (e.g., Grant & Ashford, 2008). This vision may facilitate the creation of self confidence (Koehler, 1991) and can stimulate the occurrence of self-fulfilling prophecies (e.g., Eden, 1984; 2003). *Planning*, the second phase,

refers to advance preparation for a task, action, or activity (e.g., Little, 1983; Nurmi, 1991) through the use of a step-by-step approach linking anticipation to outcomes (e.g., Ajzen, 1991; Frese & Fay, 2001). Planning is instrumental in transforming visions into action (Grant & Ashford, 2008). Finally, *action directed toward future impact* describes the purposeful behaviors intended to impact their environments or themselves (e.g., Grant, 2007, 2008; Grant & Ashford, 2008; Weick & Roberts, 1993). This last step is carried out as individuals take action to avoid future problems and make the most of potential opportunities (Frese & Fay, 2001).

Dimensions. In addition to the components of the process of proactivity, Grant and Ashford (2008) identified five dimensions across which proactive behavior varies: *form*, *intended target of impact*, *frequency*, *timing*, and *tactics*. The *form* of proactive behaviors refers to the category or type of behaviors considered to be proactive, such as those previously listed (e.g., feed-back seeking). The *intended target of impact* is the object or person of the desired change and primarily refers to the self, other people, or the organization (Grant & Ashford, 2008; Van Dyne, Cummings, & McLean Parks, 1995). The *frequency* refers to whether or not and how often the change occurs. *Timing* specifies when the behaviors occur, at what specific point in time in relation to the occasions, phases or moments (e.g., Grant & Ashford, 2008). Finally, *tactics* are the behavioral methods or strategies used to carry out the behavior, and they answer the question of “how”. For example, for feedback seeking behaviors, the tactic chosen answers the question of how the feedback is sought, whether by monitoring or inquiry.

Linkages between Proactive Behaviors and the Experiences of Stress

Research has found that stable, chronic job stressors may act as antecedents of proactive behavior (e.g., Fay & Sonnentag, 2002; Ohly, Sonnentag, & Pluntke, 2006; Sonnentag, 2003; Turner, Parker, & Williams, 2002); however, many questions still remain regarding the

relationship between stressors and proactive behaviors (Fritz & Sonnentag, 2009). In an effort to answer these questions, research should focus on identifying other stressors (e.g., ambiguity associated with an upcoming merger) which may initiate proactive behaviors if individuals anticipate the likelihood of their fruition, the role proactive behaviors play in neutralizing experiences of stress and their effectiveness in this role, whether this neutralization is dependent upon the form of proactive behavior exhibited, and the directionality of the stressor-proactive behavior relationship. Through this study, I will begin to address some of these previously unanswered questions.

Proactive coping. It appears the majority of what is known regarding the relationship between proactivity and stress is focused on either individual forms of proactive behavior, personal initiative, or proactive personality. One of the first linkages between stress and proactivity was identified as proactive coping in Crant's (2000) review of the proactive behavior literature. At the time, Crant identified proactive coping as a form of proactive behavior and suggested it had remained largely unstudied in the stress literature, despite its benefits of minimizing experiences of stress (Aspinwall & Taylor, 1997). Proactive coping is different from coping in that it precedes stressors; whereas, coping mechanisms occur once a stressful situation has been appraised (Aspinwall & Taylor, 1997). Additionally, proactive coping is an active form of coping, rather than a passive or avoidance type of coping.

The proactive coping process is described in five stages by Aspinwall and Taylor (1997): (1) accumulation of resources, such as obtaining support; (2) recognition of a likely future stressful event (i.e., foreseeing a potential stressful event); (3) preliminary appraisal of the present and future status of the potential stressor (i.e., asking questions such as "What is going to happen?" or "Should this situation be a cause for concern?"); (4) primary coping strategies to

prevent or neutralize the stressor (i.e., active coping); and (5) the search for and use of feedback about the development of the stressor (i.e., determining if coping efforts were successful).

Aspinwall and Taylor (1997) described several benefits to proactive coping. First, they suggest it may reduce the experiences of stress, even when a stressful event occurs. Second, when a stressor is managed before it becomes strain, then less resources are required to cope with the stressor. Third, before a potential stressful event occurs, there are more alternatives available to dealing with the stress; whereas, options may be more constrained once the stressful event has been appraised. Finally, if stressors can be minimized prior to becoming chronic stressors, the individual is less likely to experience chronic stress or burnout.

Alternatively, proactive coping has several disadvantages, as described by Aspinwall and Taylor (1997). If a stressful event is expected to occur but has not already, it may not come to fruition. If individuals initiated proactive coping for an event that did not happen, the loss of resources may in fact become a stressor. Additionally, potential stressors are often ambiguous and it is likely that an effective strategy for dealing with the potential stressor will not be known until the stressful event has occurred. A situation where an ineffective proactive coping mechanism was chosen can also lead to additional experiences of stress.

Taking charge. Fritz and Sonnentag (2009) considered workplace stressors (time pressures and situational constraints) occurring on a given day and examined their relationship with taking charge, a proactive behavior, on that same day. They found a positive relationship between both stressors and taking charge.

Personal initiative. Over the past several years, personal initiative has been studied in relation to the stress process. Early work in this area examined the relationship between personal initiative and both problem-focused and emotion-focused coping and found PI to be positively

related to problem-focused coping. In this same study emotion-focused coping was considered to be a passive approach to coping and negative relationships were found between PI and emotion-focused coping (Frese, Fay, Hilburger, Leng & Tag, 1997).

More recently, Fay and Sonnentag (2002) considered the relationship between workplace stressors and PI and found support for a positive relationship between the two. They considered the stress process through a control theory framework and suggested that stressors are indicators of a suboptimal process or procedure (Fay & Sonnentag, 2002). The stressor, in this case, provides an opportunity for change through personal initiative. Fay and Sonnentag (2002) found the two stressors, situational constraints and time pressure, to be positively related to PI. Additionally, Sonnentag (2003) found a positive relationship between time pressure and higher levels of PI.

Searle (2008) suggested PI included both a dispositional component in addition to changeable behaviors and posited that individuals lacking in proactivity could be taught such behaviors. Searle examined personal initiative as part of a stress management intervention plan where participants in one of two experimental groups were taught how to display higher levels of personal initiative. While the PI group showed increases of proactive behavior, both groups showed effective strain reduction. Searle concluded proactive behavior does not have a mediating effect on the reduction of strain from training programs.

Proactive personality. Proactive personality has also been studied in relation to the stress process. Parker and Sprigg (1999) examined the moderating role of proactive personality on Karasek's (1979) demands-control model of stress. They found that the relationships proposed by Karasek only held with proactive employees, concluding proactive personality plays an important role in the stress process (Parker & Sprigg, 1999).

CHAPTER III

HYPOTHESIS DEVELOPMENT

This study follows the traditional stressor-strain-behavior relationship pattern as commonly studied by stress researchers (e.g., Bedeian & Armenakis, 1981; Perrewé et al., 2004; Podsakoff et al., 2007) and considers the role of proactive behaviors as neutralizers of stress-related outcomes. A number of individual proactive behaviors have been identified in the literature (see for review Grant & Ashford, 2008) and inclusion of all proactive behaviors is simply unrealistic in one study; therefore, the scope of this study limits the number of proactive behaviors to be considered. As an initial step in understanding the complex role of proactive behaviors as moderators of the stress process, the current research considers the effectiveness of three forms of proactive behaviors as coping mechanisms, using a framework provided by Wrzesniewski and Dutton's (2001) job crafting theory.

Job crafting was introduced and defined by Wrzesniewski and Dutton (2001) as changes an individual makes to the task, relationship, and cognitive boundaries of his/her job. Physically changing task boundaries refers to changing the number of activities or the ways one performs such activities; whereas, cognitively changing task boundaries involves making changes to how the job is perceived. For example, Wrzesniewski and Dutton posited individuals can change cognitive boundaries by changing their perspective of their job by seeing their contribution as a whole instead of focusing on individual aspects of the job. Changing relational boundaries involves making changes among the people with whom an individual interacts while performing

his or her job. An individual participates in job crafting by making a change to any one of these boundaries.

Job crafting is based on the assumption that individuals make changes to their task and relationship boundaries in order to create work that is more satisfying instead of following the assumptions of traditional job design where satisfied employees assume more responsibilities at work than those who are not satisfied (Wrzesniewski & Dutton, 2001). Three motivations for engaging in job crafting behaviors have been identified and include gaining personal control, creating a positive sense of self, and fulfilling a basic need of having relationships with others (Wrzesniewski & Dutton, 2001).

By changing cognitive, task, or relationship boundaries of their jobs through the process of job crafting, individuals are able to gain control over their work roles. According to social identity theory (e.g., Tajfel, 1981, 1982), individuals seek to achieve and maintain a positive image of themselves, and they are able to do so by proactively establishing role boundaries. Job crafting also allows employees to change relationship boundaries of their roles to include (or not include) other people in their work, thus fulfilling a basic need of human connection. Ultimately, participation in job crafting allows employees to change the meaning of their work to become more fulfilling and to create a positive identity for which they are known at work (Wrzesniewski & Dutton, 2001).

As previously identified, three forms of proactive behaviors will be considered in this study and include those behaviors which have a physical task orientation, a cognitive orientation, and a relationship orientation. The same framework is also used to identify work-related stressors as physical task stressors, cognitive stressors, and relationship stressors. The summary research model developed to test the hypotheses developed in this study is displayed in Figure 1. This

model includes these three categories of stressors and proactive behaviors mentioned above, job tension as well as three like-category dimensions of burnout. In addition to this summary model, a detailed model for each category is also provided: Task-Oriented Research Model (Figure 2), Cognitive-Oriented Research Model (Figure 3), and Relationship-Oriented Research Model (Figure 4).

Figure 1

Summary Research Model of the Role of Proactive Behaviors in the Stress Process

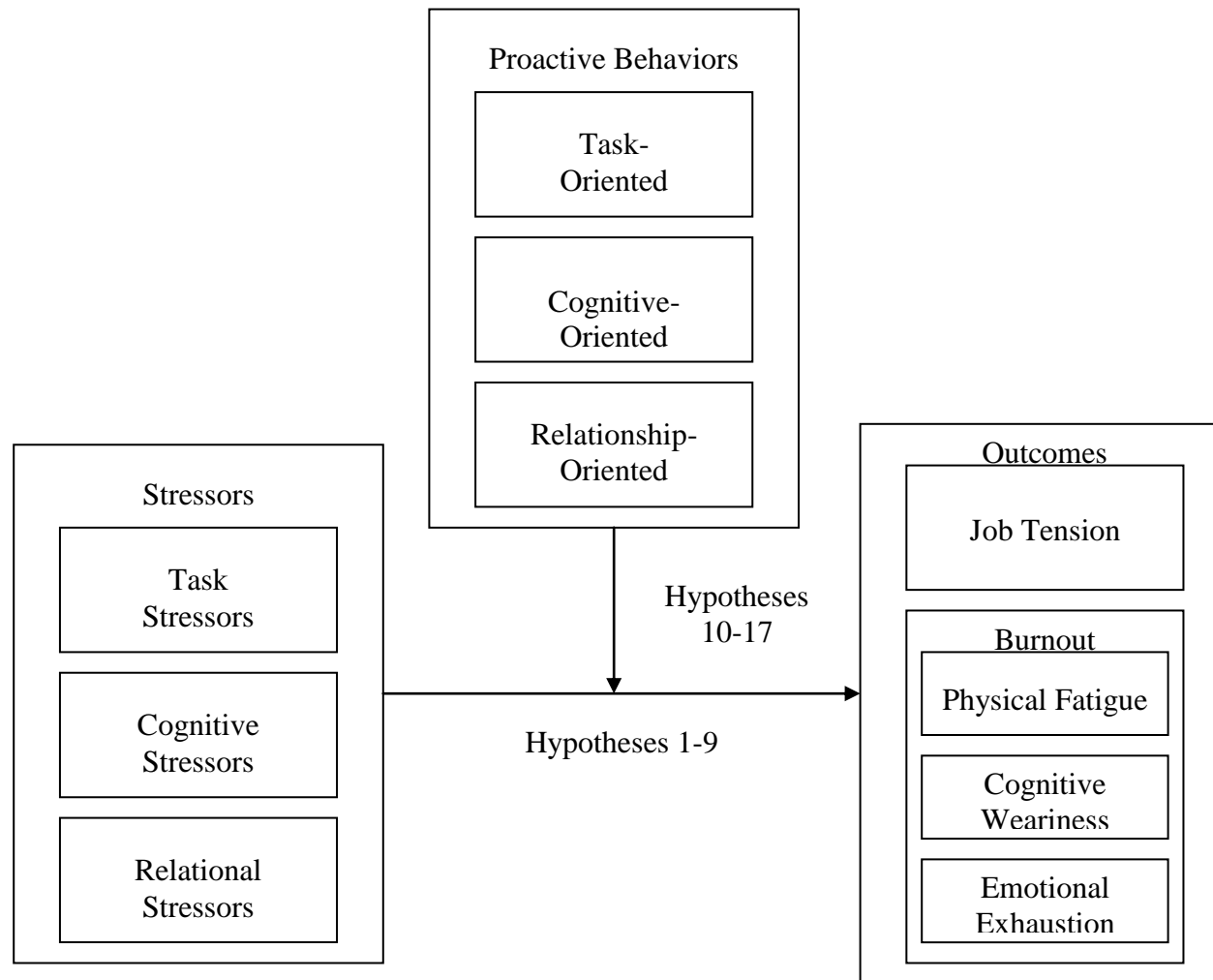


Figure 2

Task-Oriented Research Model

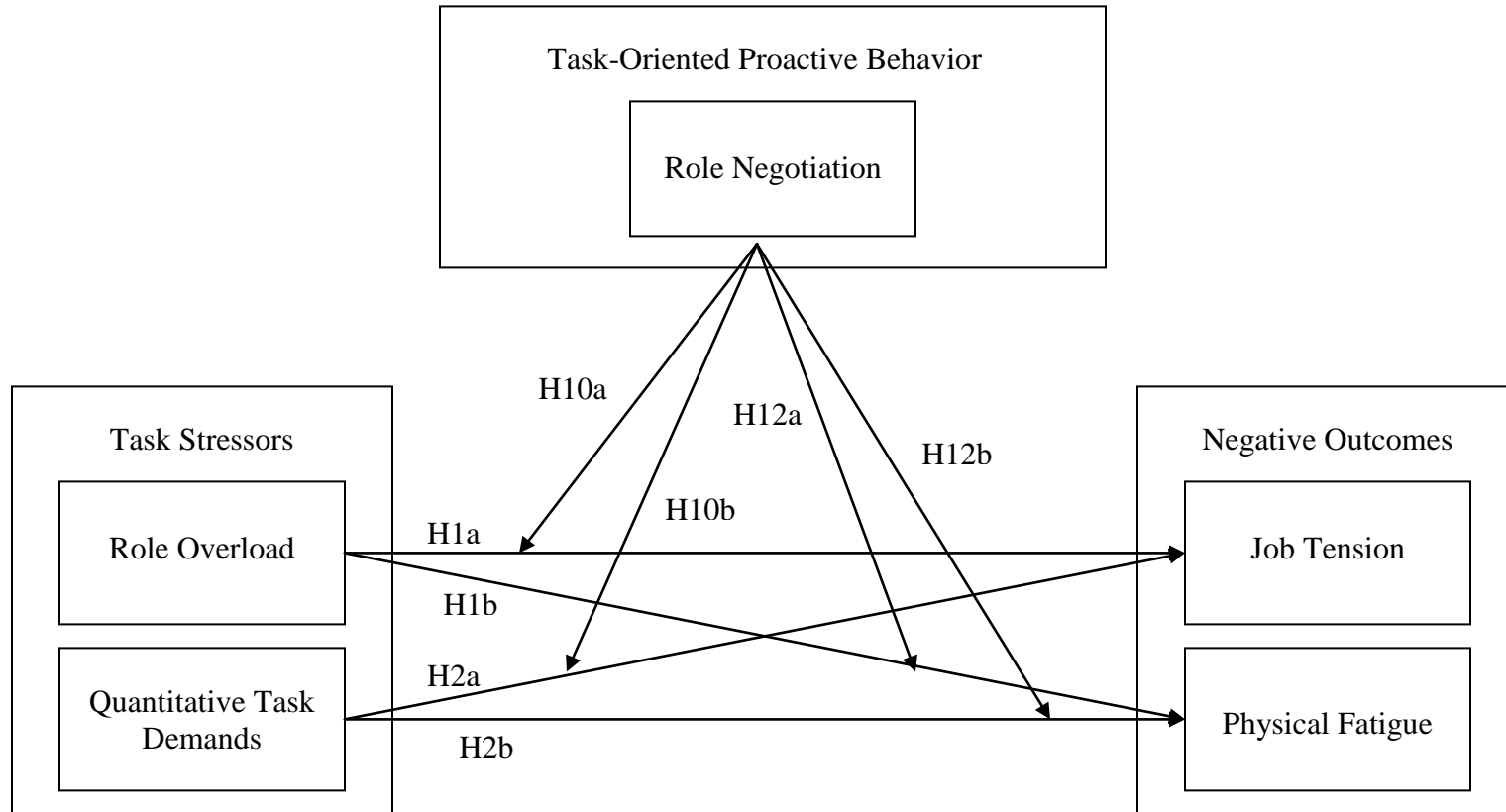


Figure 3

Cognitive-Oriented Research Model

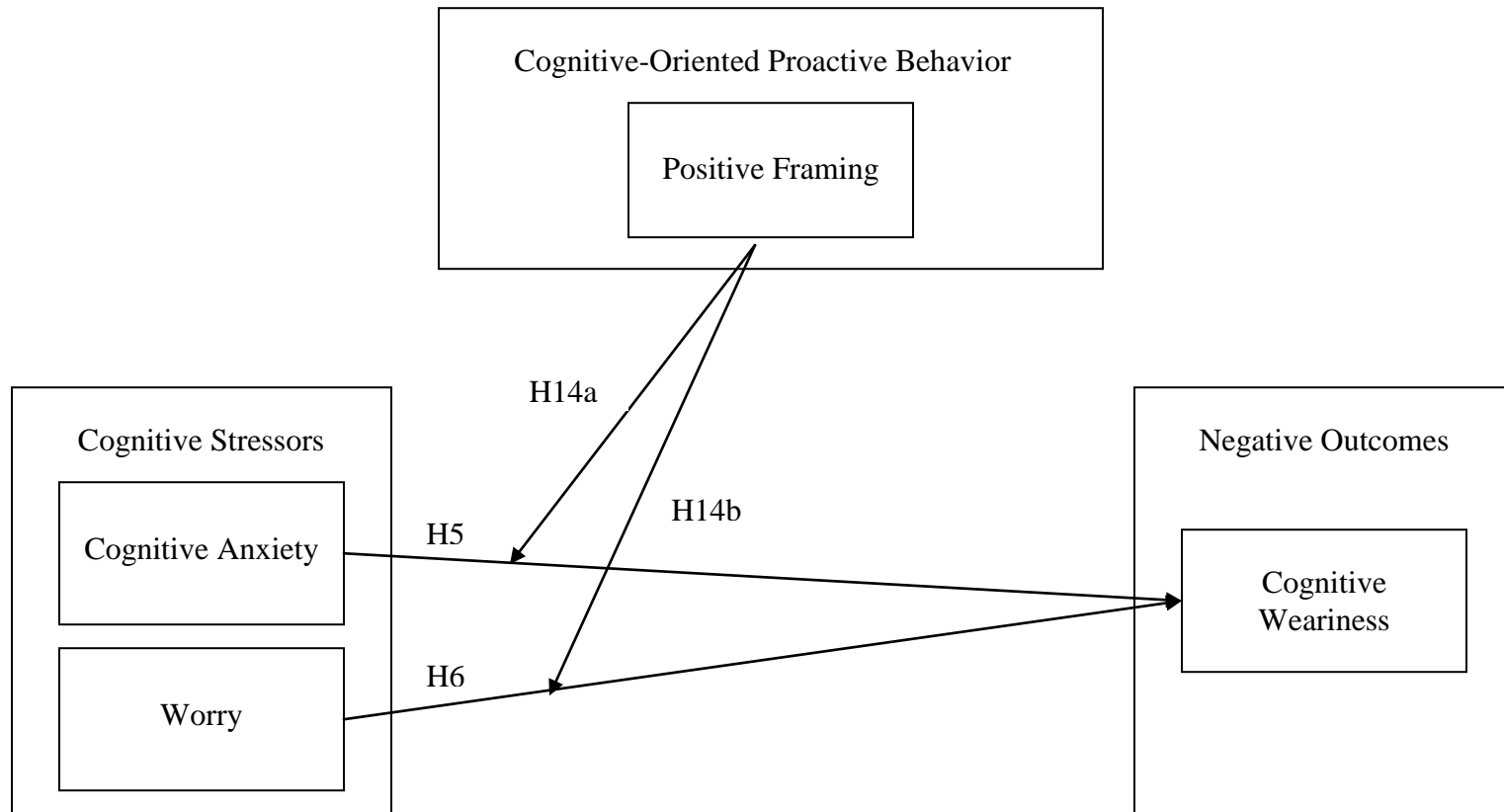
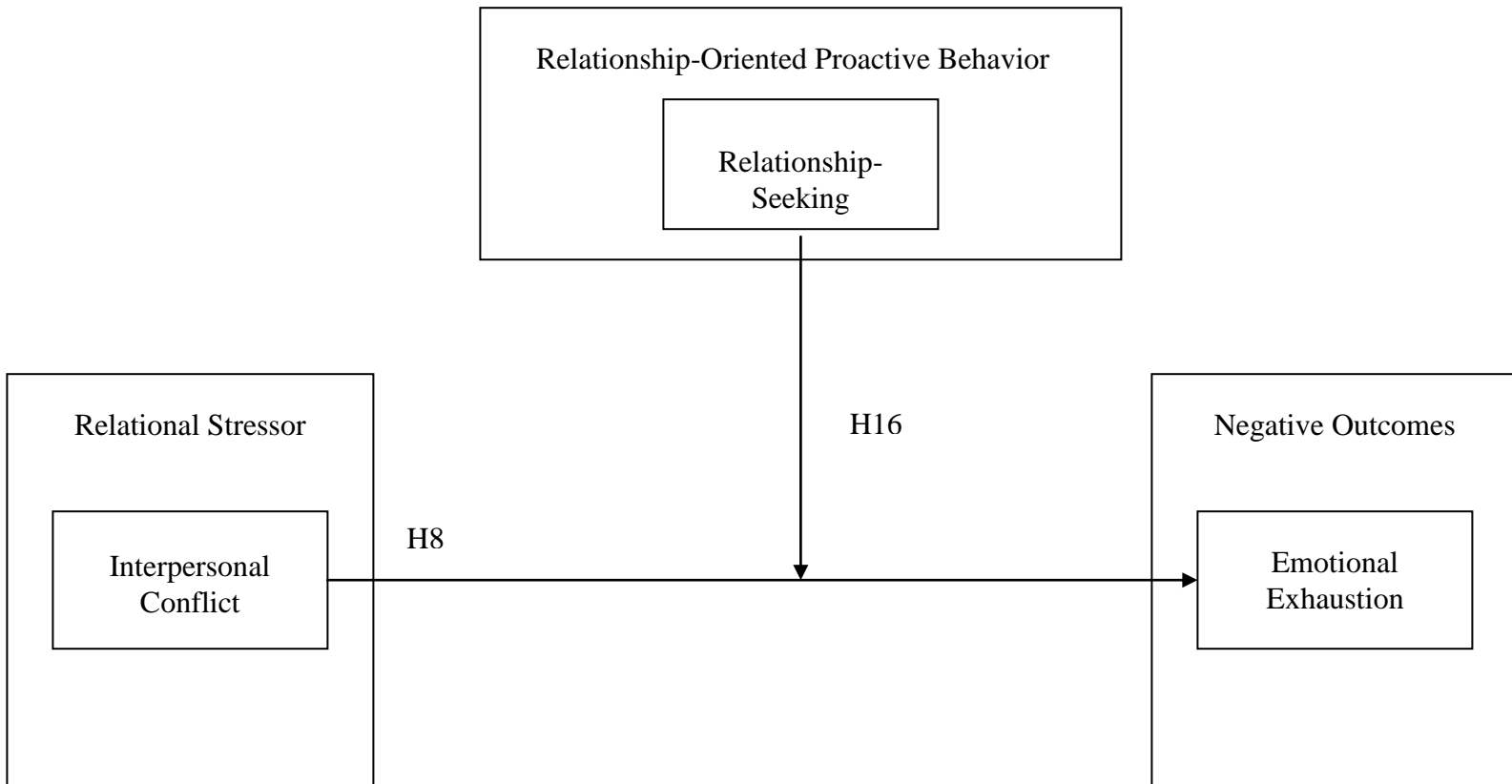


Figure 4

Relationship-Oriented Research Model



Hypotheses have been developed for each type of stressor, proactive behavior resource, and strain response consistent with the job crafting framework. Early stress research considered stressors, resources, and strains to be global, meaning the application of any resource to any stressor should result in less strain (e.g., Karasek, 1979); however, moderating effects of resources in such hypothesized stressor-strain relationships have not been consistently supported (e.g., de Jonge & Dormann, 2006). For example, a resource such as positive framing (a cognitive resource) may not be supported as a neutralizer in the role overload (task-related stressor) and emotional exhaustion (relationship-related burnout) relationship; however, it is likely to be supported as a neutralizer in the relationship between cognitive stressors and cognitive forms of strain or burnout. Similarly, a resource of training employees to appropriately lift heavy objects may be an effective neutralizer in a relationship between physical stressors and back strain, but is unlikely to influence the relationship between the stressor of interpersonal conflict (relational stressor) and job tension.

As a result, recent research has suggested relationships among stressors, resources, and strains depend on the matching of respective constructs (e.g., de Jonge & Dormann, 2006; Viswesvaran et al., 1999; Wall, Jackson, Mullarkey, & Parker, 1996). Following a matching hypothesis (Viswesvaran et al., 1999), it is suggested that less strain or tension will result when the type of resource (e.g., those with a task, cognitive, or relationship orientation) is matched with corresponding task, cognitive, or relational stressors. Most recently a triple match principle has been supported (de Jonge & Dormann, 2006), which suggests that the mitigation of experienced stress will be highest when types of stressors, resources, *and* strains are aligned. de Jonge and Dormann tested three categories (cognitive, emotional, and physical) and found a linear relationship between the degree of match and the neutralization of stress. Strain was most

effectively ameliorated when there was a triple match (33% of the relationships tested were significant), which was followed by those with a double match (16.7% significant).

Relationships between unmatched stressors, resources, and strain were not significant. These results suggest that future empirical research should consider the match between constructs in the stress process. The hypotheses developed reflect the triple match principle using the three categories of stressors, coping resources, and strain introduced by Wrzesniewski and Dutton (2001): task, cognitive, and relationship oriented.

In addition to conceptually aligning stressors, resources, and strains, research outside of the stress literature (i.e., personality and psychometric research) has long debated the tradeoffs between bandwidth and fidelity (e.g., Cronbach, 1960; Cronbach & Gleser, 1965; Hogan, Hogan, & Roberts, 1996; Ones & Viswevaran, 1996; Schneider et al., 1996). This debate has primarily centered on the use of broad versus narrow personality traits in predicting outcomes, such as performance.

The general consensus stemming from this debate is broad traits moderately predict broad outcomes, and narrow traits can maximize prediction for narrow outcomes. This consensus has been empirically supported (Cronbach & Gleser, 1957; Hogan et al., 1996; Schneider et al., 1996). In addition to the matching of bandwidth, Schneider and Hough (1995) suggested predictor and criterion variables should be matched according to their relevance. They suggested the predictor and criterion should be in the same nomological network. Past research lacked precision due to failure to match bandwidths of predictor and criterion variables. High bandwidth predictors and criterion variables were assumed, which has resulted in low fidelity findings. As such, I have chosen a priori particular stressors and proactive behaviors along with a particular

strain, job tension, and specific dimensions of burnout in order to maximize predictive validity through the use of specific, narrow constructs within the same nomological network.

Task Stressors

Role stressors are chronic stressors concerning the roles an individual holds at work and have been substantiated as stressors (e.g., Jackson & Schuler, 1985; Perrewé et al., 2004; Rizzo, House, & Lirtzman, 1970; Schaubroeck, Cotton, & Jennings, 1989). They have been identified by researchers for several decades as antecedents to certain detrimental outcomes such as psychological strain, tension, and negative workplace outcomes such as job dissatisfaction and withdrawal behaviors (e.g., Jackson & Shuler, 1985; Kahn et al., 1964; Katz & Kahn, 1966, 1978; Perrewé et al., 2004; Perrewé et al., 2005; Rizzo et al., 1970; Schaubroeck et al., 1989). Kahn and colleagues (1964) introduced these stressors as role conflict and role ambiguity. Role overload was also suggested as an example of role conflict, but has more recently been considered as a distinct role stressor.

Role Overload

Role overload is experienced when a focal person performs various tasks that are mutually compatible; however, it is unlikely these tasks can all be accomplished within a set time frame (Kahn et al., 1964). Researchers have suggested that experiences of role stress are psychologically unpleasant and can cause negative emotional responses (e.g., Perrewé et al., 2004; Schaubroeck et al., 1989). Consistent with stress theory and previous research, it is suggested that role overload will be positively related to experiences of job tension and burnout. More specifically, it is expected that role overload (a task-related stressor) will be most strongly related to job tension and the physical fatigue dimension of burnout.

Hypothesis 1: Role overload is positively related to (a) job tension and (b) physical fatigue.

Job Demands

One of the most commonly studied workplace stressors is job demands. Karasek's (1979) JDC model focused on job demands as a stressor and defined these demands in two ways: (1) as those related to workload, conflicts or other stressors which induce a heightened stressful state and (2) as psychological stressors related to the workload, interpersonal conflict at work, or other stressors associated with unexpected tasks. Both of these definitions, while addressing the essence of job stressors, highlight the reality that conceptualizing and measuring job demands is difficult (e.g., Kristensen, Bjorner, Christensen, & Borg, 2004). Early operationalizations of job demands measures included multiple types of demands in one measure, without recognizing such differences, and single items often had differing meanings depending on who was responding (e.g., Kristensen et al., 2004).

Work has been done to refine the construct, and as a result several types of job demands have been identified and items measuring each of these types have been developed. For example, Bakker and his colleagues have defined job demands as organizational, relational, or physical elements of a job that require continual cognitive or physical effort (Bakker, Demerouti, & Euwema, 2005). In a study testing their JDR model, they examined four specific job demands (work overload, emotional demands, physical demands, and work-home interference), Kristensen (2002) developed a measure for assessing psychosocial factors in the workplace, Copenhagen Psychosocial Questionnaire, which includes five dimensions of job demands (quantitative demands, cognitive demands, emotional demands, emotional concealment demands, and sensorial demands). While much discussion still remains in the

literature regarding types of job demands, substantial support exists suggesting job demands have a positive relationship with strain (e.g., Bakker et al., 2003; Karasek, 1979; Schaubroeck & Merritt, 1997; Schnall et al., 1990). It is suggested that quantitative task demands are expected to be most strongly related to job tension and the physical fatigue dimension of burnout.

Hypothesis 2: Quantitative task demands are positively related to (a) job tension and (b) physical fatigue.

Hypothesis 3: The largest percentage of variance in job tension will be explained by (a) role overload and (b) quantitative task demands.

Hypothesis 4: The largest percentage of variance in physical fatigue will be explained by (a) role overload and (b) quantitative task demands.

Cognitive Stressors

Cognitive Anxiety

Lazarus (1991) suggested stress results from the cognitive appraisal of a relationship between the person and his or her environment, in which this relationship is relevant to the individual's well-being and in which the person's resources are exceeded. Subsequent research has described the essence of the transactional theory of stress is to understand how an individual's appraisal of a situation affects subsequent physiological and emotional responses (Perrewé et al., 2004). As such, understanding the role of cognitive anxiety in the stress process is important. Anxiety has traditionally been considered in the stressor-strain relationship as a strain variable. For example, Perrewé and colleagues (2004) used psychological (i.e., cognitive) anxiety, along with other variables such as somatic complaints and physiological strain to operationalize strain. While psychological anxiety may indeed function as a strain variable, it is also likely to function as a cognitive stressor.

Cognitive anxiety has been defined as negative cognitive thoughts and expectations about a particular situation, outcomes, or oneself (Morris, Davis, & Hutchings, 1981). According to Lazarus' (1991) transactional theory of stress, a cognitive appraisal is an antecedent to experiences of stress, and thus, it is likely that an individual who experiences cognitive anxiety is more likely to evaluate any relationship between one's self and the environment as more stressful than those lower in cognitive anxiety. As such, it is likely that cognitive anxiety may function as a stressor at work. Therefore, it is suggested that cognitive anxiety is positively related to strain. Following the matching principle, cognitive anxiety is expected to be most strongly related to the dimension of cognitive burnout.

Hypothesis 5: Cognitive anxiety is positively related to cognitive weariness.

Worry

Worry is defined as repetitive thoughts about potential negative life events (Borkovec, Ray, & Stober, 1998; Segerstrom, Tsao, Alden, & Craske 2000). This repetition of negative thought is often referred to as rumination. Both rumination and worry have been found to be highly correlated with negative affectivity and neuroticism, both of which are individual differences that measure a predisposition to negative mood states (Watson & Clark, 1984). Researchers tend to agree that worry is primarily associated with an attempt to constructively solve problems; however, the problem solving is thwarted by cognitive predispositions such as anxiety (Brosschot, Gerin, & Thayer, 2006; Davey, 2004). When problems solving efforts are ineffective, a repetitive focus (worry) can exacerbate negative moods (Segerstrom et al., 2000). Repetitive thoughts, such as worry, "contain cognitive representations of a psychological problem, a difficulty, a crisis, or, in other words, a stressor" (Brosschot et al., 2006, p.114).

Therefore, it is hypothesized that worry rumination can act as a stressor and will be positively related to strain. More specifically, it is expected that worry rumination will have the strongest positive relationship with the cognitive dimension of burnout.

Hypothesis 6: Worry is positively related to cognitive weariness.

Hypothesis 7: The largest percentage of variance in cognitive weariness will be explained by (a) cognitive anxiety and (b) worry.

Relational Stressor

Interpersonal Conflict

One of the most important and often experienced sources of stress in the workplace is interpersonal conflict (Keenan & Newton, 1985). Interpersonal conflict is described by negative interpersonal occurrences which involve hostility, angry exchanges, verbal aggression or related situations (Keenan & Newton, 1985). The behaviors exhibiting interpersonal conflict may vary in intensity from minor arguments between coworkers or spreading rumors about coworkers to intense physical abuse (e.g., Spector & Jex, 1998).

Research has demonstrated the relationship between interpersonal conflict and negative consequences (e.g., Frone, 2000; Spector & Jex, 1998). In a meta-analysis of 18 studies comprised of various occupations, individuals, and geographic locations, Spector and Jex (1998) found interpersonal conflict at work to be positively related to psychological strains such as anxiety, depression, and frustration as well as turnover intentions. Additionally, interpersonal conflict was negatively related to job satisfaction (Spector & Jex, 1998). Consistent with prior research, it is suggested that interpersonal conflict at work is positively related to job tension and experiences of strain. Moreover, it is expected to be most strongly related with the

emotional exhaustion dimension of burnout because of the relational nature of emotional exhaustion.

Hypothesis 8: Interpersonal conflict at work is positively related to emotional exhaustion.

Hypothesis 9: The largest percentage of variance in emotional exhaustion will be explained by interpersonal conflict.

Proactive Behaviors as Coping Strategies

In this research, I suggest proactive behaviors can function as coping strategies used to minimize loss or threat of resources and/or to gain control in order to reduce strain and burnout. It is likely that proactive behaviors which can be categorized as those physically changing task boundaries and relationship boundaries are examples of problem-focused coping strategies, while behaviors involving cognitively changing task boundaries are considered meaning-focused coping strategies.

Motivations of job crafting, a proactive behavior, posited by Wrzesniewski and Dutton (2001) are consistent with reasons why proactive behaviors are likely to function as coping mechanisms in the stress process. Mainly, in Karasek's (1979) JDC model of stress, control buffers the positive relationship between job demand stressors and experiences of strain such that the relationship is weakened, ultimately resulting in lower levels of experienced strain. Therefore, it is likely that proactive behaviors, which are examples of job crafting are also likely to buffer the harmful effects of work-related stressors on strain and burnout because they allow the focal person to experience more control in his or her role. The first motivation, of gaining control, is consistent with research on proactive behaviors.

For example, Frese and Fay (2001) proposed appraisals of control to be an antecedent of proactivity. Frese, Garst, and Fay (2000) found support for this notion, and by demonstrating control appraisals, predicted personal initiative in a longitudinal study. Parker and colleagues (2006) did not find support for their hypothesis of a positive relationship between control appraisal and proactive behaviors (Parker et al., 2006); however, this proposed relationship is still being explored in the proactive behavior literature. Grant and Ashford (2008) suggest autonomy, implying control, is an antecedent of proactive behavior. Research has found employees are more likely to engage in proactive behaviors under conditions of autonomy (e.g., Axtell & Parker, 2003; Morrison, 2006; Parker et al., 1997; Parker et al., 2006).

The second motivation, creating and maintaining a positive image of one's self by engaging in proactive behaviors, is likely to be a resource due to its functionality in assisting individuals in achieving their goals in the workplace or enhancing their growth and development potential. This is consistent with research on social effectiveness which has similar goals of maintaining a positive self-image, where constructs such as political skill have been shown to be an antecedent to outcomes such as reputation (Ferris, Blass, Douglas, Kolodinsky, & Treadway, 2003; Zinko, Ferris, Blass, & Laird, 2007) and feelings of trust and confidence in the focal person (Ferris et al., 2007). Consistent with the third motivation, proactive behaviors focused on building relationships and thus expanding relationship boundaries follow the motivation of establishing relationships with others at work.

Resources with a Task Orientation

Role Negotiation. Ashford and Black (1996) found that newcomers in organizations engaged in job negotiations to gain control over their new jobs and to improve person-job fit. Ashford and Black suggested that by negotiating job changes, individuals were involved in the

decision-making about job structure, thereby gaining more control over their roles. Job change negotiation has been used in the socialization context to gain control and overcome ambiguity (Dawis & Lofquiest, 1978; Griffin, Colella, & Goparaju, 2000; Nicholson, 1984). Ashford and Black (1996) found the use of job negotiation to be positively related to newcomer job performance and job satisfaction. While this tactic has been studied within the context of socialization, it is likely that others in established positions within organizations who recognize a need for change may also engage in role negotiating behaviors in efforts to gain control. As such, it is expected that role negotiation will function as a problem-focused coping mechanism in the stress process and will be most effective in neutralizing the relationship between task-related stressors (i.e., role overload and quantitative task demands) and strain (i.e., job tension and physical fatigue).

Hypothesis 10: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be neutralized.

Hypothesis 11: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be most effectively neutralized.

Hypothesis 12: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be neutralized.

Hypothesis 13: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be most effectively neutralized.

Resources with a Cognitive Orientation

Positive Framing. In the coping literature, Lazarus and Folkman (1984) considered viewing oneself in a positive manner to be an important coping strategy because the beliefs required for such positive thoughts provide hope that sustains efforts to cope, even in trying conditions. In the proactive behavior literature, a similar construct, positive framing, has been examined as a proactive behavior used by newcomers in an organization (e.g., Ashford & Black, 1996, Kim Cable, & Kim, 2005). Positive framing has been used by individuals to increase perceived control by interpreting situations in a positive light as supportive instead of antagonistic, or as helpful versus overbearing (Kim et al., 2005). It allows individuals to view their work as challenging and not threatening, which enables greater success (Ashford & Black, 1996).

Ashford and Black (1996) found the use of positive framing to be positively related to job satisfaction and performance of newcomers. Similarly, Taylor and Brown (1988) found that individuals who used positive framing experienced lower levels of stress, more successful recovery from illness, and more productive and creative completion of work. Wanberg and Kammeyer-Mueller (2000) also found those who used positive framing were more likely to be satisfied with their jobs several months after their start date. Kim and colleagues (2005) found moderating effects of positive framing such that the relationship between institutionalized socialization tactics and person-organization fit (P-O fit) was only significant for those who used positive framing. The success of socialization programs designed to increase P-O fit were only successful for individuals who approached such programs positively and were more receptive to the goals instead of being cynical about the purpose of the programs.

Theoretically, positive framing functions as a resource by allowing individuals to gain control in stressful or uncertain situations and thereby increases self-efficacy and self-confidence (e.g., Ashford & Black, 1996). Empirical work has supported this notion. Therefore, it is suggested the use of positive framing will most effectively neutralize the negative effects of cognitive burnout caused by cognitive stressors such as worry and cognitive anxiety.

Hypothesis 14: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be neutralized.

Hypothesis 15: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be most effectively neutralized.

Resources with a Relationship Orientation

Relationship-building. Individuals vary in the degree to which they seek out opportunities for relationships with others. In the proactive behavior literature, relationship-building behaviors have been studied within the context of socialization of new employees (e.g., Ashford & Black, 1996; Kim et al., 2005; Morrison, 2002; Reichers, 1987) and include activities such as networking, building relationships with the boss, and general socializing at work (Kim et al., 2005). Research examining these behaviors as they occur outside the context of newcomer socialization remains limited within the proactive behavior literature; however, proactive relationship building does occur within the workplace.

For example, much research has focused on identifying the antecedents and outcomes of networking behavior in organizations (e.g., Cummings & Higgins, 2006; Flap & Völker, 2001).

Network research is based on the assumption that individuals engage in networking behaviors to build social capital (Burt, 1992; Lin, 1999; Portes, 1998). Social capital has been defined as one's standing in an organization and his or her ability to benefit from that standing to influence others within the organization (Friedman & Krackhardt, 1997). Research in political skill has examined the benefits of those who are skilled at identifying supportive contacts and building strong networks (Ferris et al., 2007). Individuals with networking ability (i.e., those who are able to build relationships and networks) are able to secure assets which are necessary resources in accomplishing personal and organizational objectives (Ferris et al., 2007). Individuals within these networks are able to take advantage of opportunities as a result of their positioning (Ferris et al., 2005; Pfeffer, 1992).

Just as benefits of networking behaviors have been found outside of the proactivity literature, relationship building behaviors within studies of socialization in the proactive behavior literature have been theorized and found to be equally beneficial. These behaviors are beneficial to individuals who engage in them because the individuals become effective network builders (e.g., Nelson & Quick, 1991); they interact regularly with organizational members who provide social support and explanation of organizational norms (Cable & Parsons, 2001; Jones, 1986); they receive advice, social support, and instruction regarding role behaviors, which helps to reduce stress (e.g., Louis, Posner & Powell, 1983; Major, Kozlowski, Chao, & Gardner, 1995; Nelson & Quick, 1991; Reichers, 1987); and they are able to gain a sense of community by sharing information, which reduces employee anxiety (Kim et al., 2005). Empirical research supports the notion that efforts to build relationships with supervisors and peers are beneficial in the socialization process (e.g., Ashford & Black, 1996; Settoon & Adkins, 1997).

Within the stress literature, findings supporting these propositions have been found in the role that social support plays as a resource in neutralizing negative effects of stress. For example, Zellars and Perrewé (2001) found social support, which refers to expressions of sympathy or empathy for a distressed individual, buffers effects of burnout when such support is positive. They also found that negative conversations tend to exacerbate the experiences of burnout. Bond and Bunce (2003) also found that feelings of acceptance and job control were positively related to mental health, job satisfaction, and work performance outcomes, which suggests social support is an important resource in the stress process. Therefore, it is suggested that behaviors intended to build relationships with others at work will be effective neutralizers of subsequent experiences of strain and burnout.

Similarly, intra-organization support has also shown to be effective for buffering negative effects of workplace violence, which is a severe form of interpersonal conflict (Thomas, Bliese, & Jex, 2005). Thomas and colleagues found such support moderated the relationship between workplace violence exposure and job satisfaction and organizational commitment. Conclusions made from Halbesleben's (2006) meta-analysis suggest social support is a resource that moderates the relationship between demands and job burnout such that less burnout is experienced by those with strong social support. It is suggested that proactive relationship-building behaviors will function as a coping resource, similar to social support, and will most effectively neutralize negative effects of the relationship between relational stressors and emotional exhaustion.

Hypothesis 16: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be neutralized.

Hypothesis 17: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated most strongly by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be most effectively neutralized.

CHAPTER IV

METHOD

The present study was designed to examine the role of proactive behaviors in the stress process and to evaluate their effectiveness as coping resources. This study follows the triple matching principle and considers the bandwidth-fidelity issues in stress research. The current chapter describes the participants, procedures for data collection, and instruments used to test the hypotheses.

Participants and Procedures

Data Collection

Data collection for the current study was approved by a mid-sized, government health care facility in the Southeast United States. Data was collected in two ways. For the professional staff (i.e., administrators, physicians, nurses, business services, etc.), a packet of information was provided to each department director. The packet included a letter describing the procedures, flyers to be distributed to each employee through departmental meetings or individual employee mailboxes, and a flyer to be hung on the department's bulletin board. Department supervisors were also reminded by the Chair of the organization's Research Committee to distribute flyers and hang the poster. Instructions were provided on the flyer for interested employees to email the

principal researcher to volunteer to participate. Once this email of interest was received by the principal researcher, an online link to the survey was provided to volunteers.

Employees with direct care responsibilities (i.e., bathing, feeding) for patients did not have email access at work; however, they had weekly meetings with a supervisor from the professional staff. Access was granted for the principal researcher to attend these meetings and distribute paper copies of the survey. Direct care employees do not have employee email addresses. All responses were confidential. Responses received electronically were stored in an on-line data base, only accessible to the principal researcher; whereas, paper surveys were stored in a locked office of the researcher. As an incentive, participants were entered into a drawing to win one of four \$50 Visa gift cards.

Participants

Surveys were distributed to 1,069 employees. Responses were obtained from 181 employees (16.9% response rate). Respondents were predominately female (71.3%) and white (54.1%). The average age of the respondents was 40.52 years ($SD = 12.97$), and almost half of the respondents had earned at least an undergraduate college degree (49.8%). Table 1 outlines the sample characteristics of sex, race, and highest educational level completed.

Table 1

Sample Characteristics: Sex, Race, and Education

Demographic Characteristic	% of Sample
<i>Sex:</i>	
Female	71.3
Male	22.1
Not Specified	6.6
<i>Race:</i>	
Asian/Native Hawaiian	-
Black/African American	37.6
Latino/Latina/Hispanic	-
Other	0.6
Multi-racial	-
White	54.1
Not Specified	7.7
<i>Highest Level of Education:</i>	
High School/GED	25.4
Associates Degree	11.0
Technical Degree	4.4
Bachelors Degree	24.9
Masters Degree	19.9
Doctoral Degree	5.0
Not Specified	9.4

Measures

The following section includes a description of the scales used in the present study. The means, standard deviations, coefficient alpha reliabilities, and intercorrelations are presented in Table 2. Coefficient alphas were respectable ($\alpha > .70$) for all variables in the study except for role overload, which was calculated $\alpha > .60$.

Table 2
Means, Standard Deviations, Reliabilities, and Intercorrelations

	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Role Overload	3.04	1.27	0.602														
N			176														
2. Quantitative Job Demands	2.40	0.71	.662**	0.714													
N			167	170													
3. Cognitive Anxiety	2.67	1.09	.113	.194*	0.892												
N			166	161	170												
4. Worry	2.81	0.75	.116	.177*	.681**	0.916											
N			160	155	156	164											
5. Interpersonal Conflict	1.37	0.42	.263**	.249**	.216**	.182*	0.792										
N			174	168	168	162	178										
6. Negotiation	1.96	0.76	.132	.172*	.251**	.084	.218**	0.916									
N			164	158	160	155	166	168									
7. Positive Framing	3.66	0.87	-.113	-.077	-.167*	-.248**	-.124	.085	0.782								
N			169	164	164	157	171	166	173								
8. Networking Ability	4.76	1.17	-.042	-.034	.024	.003	-.181*	.205**	.091	0.838							
N			167	161	161	155	169	164	169	171							
9. Job Tension	3.36	1.50	.433**	.484**	.441**	.433**	.438**	.244**	-.072	-.037	0.897						
N			167	161	161	156	169	165	169	167	171						
10. Fatigue	3.37	1.53	.353**	.276**	.457**	.486**	.289**	.099	-.213**	-.044	.589**	0.937					
N			165	159	160	154	167	163	167	165	165	169					
11. Cognitive Weariness	2.72	1.40	.318**	.306**	.560**	.549**	.163*	.089	-.213**	-.017	.504**	.694**	0.947				
N			168	162	163	157	170	166	170	168	168	167	172				
12. Emotional Exhaustion	2.15	1.17	.310**	.298**	.439**	.336**	.246**	.093	-.276**	-.116	.304**	.451**	.516**	0.880			
N			171	165	165	159	173	168	173	171	171	169	172	175			
13. Factual Autonomy	3.75	0.72	-.061	-.140	-.296**	-.273**	-.277**	-.218**	.041	-.047	-.300**	-.227**	-.274**	-.130	0.782		
N			141	137	137	132	142	139	143	140	142	139	142	144	144		
14. Negative Affect	1.71	0.64	.207**	.184*	.629**	.608**	.370**	.210**	-.121	-.025	.526**	.540**	.555**	.464**	-.376**	0.883	
N			162	156	157	152	164	161	164	162	162	160	163	166	138	166	
15. Materialism	3.63	1.13	.068	-.057	.266**	.265**	.057	.102	-.304**	.141	.116	.297**	.202**	.165*	-.085	.216**	0.750
N			167	161	162	155	169	164	169	167	167	165	168	171	140	164	171

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

¹ Correlations were calculated using pairwise deletion. Thus pairwise sample (N) are given.

² Coefficient alpha reliabilities are given along the diagonal.

Stressors

Three types of stressors are examined. First, *Task Stressors* examined in this study are role overload and quantitative task demands. Second, *Cognitive Stressors* include worry and cognitive anxiety. Third, the *Relational Stressor* included is interpersonal conflict experienced with supervisors and/or peers.

Role Overload. Role overload is measured using three items developed by Seashore, Lawler, Mirvis, and Cammann (1982). The items include “I never seem to have enough time to get everything done”, “I have too much work to do to do everything well”, and “The amount of work I am asked to do is fair” (reverse-coded). In the current study, the role overload scale demonstrated an internal consistency reliability of $\alpha = .60$. This is consistent with prior research, as Perrewé and colleagues (2005) calculated a reliability coefficient of .64 when using these items as a measure of role overload. Additionally, the original reliability estimate of the scale was $\alpha = .65$ (Seashore et al., 1982).

Job Demands. Quantitative task demands is measured using four-items of the quantitative demands facet of the Copenhagen Psychosocial Questionnaire (Kristensen, 2002; Kristensen, Bjorner, Christensen, & Borg, 2004). The items include “Is your workload unevenly distributed so it piles up?”, “Do you get behind on your work?”, “How often can you take it easy and still do your work?”, and “Do you have enough time for your work tasks?”. The internal consistency reliability of quantitative task demands is $\alpha = .71$.

Cognitive Anxiety. Cognitive anxiety is measured using Lehrer and Woolfolk’s (1982) 11-item Cognitive Anxiety scale, which includes items such as “I have an uneasy feeling”, “I dwell on mistakes that I made”, and “I cannot concentrate at a task or job without irrelevant

thoughts intruding.” The internal consistency reliability of $\alpha = .89$ was calculated in this study for cognitive anxiety.

Worry. Worry is measured using the Penn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990). Items include “As soon as I finish one task, I start to worry about everything else I have to do” and “I am always worried about something.” In the current study, the internal consistency reliability of $\alpha = .92$ was calculated for worry.

Interpersonal Conflict. This study used Frone’s (2000) modification of Spector and Jex’s (1998) Interpersonal Conflict at Work Scale. Frone’s scale includes two four-item scales, one measuring the conflict between a focal person and his or her supervisor, and the other measures conflict between a focal person and his or her coworkers. Items measuring conflict with the supervisor include “How often do you get into arguments with your supervisor at work?”; whereas, the conflict with coworkers scale includes items such as “How often are your coworkers rude to you at work?”. An internal consistency reliability of $\alpha = .79$ was demonstrated.

Proactive Behaviors

Three types of proactive behaviors are included in the study. First, *Task-Oriented* proactive behaviors include negotiation. Second, *Cognitive-Oriented* proactive behaviors include positive framing. Third, *Relationship-Oriented* proactive behaviors include networking.

Role Negotiation. Ashford and Black’s (1996) items measuring role negotiation were adapted for use in this study. Participants answered eight-items regarding the degree to which they have discussed desirable job changes, task assignments, and other components of their job with their supervisors (4 items) and coworkers (4 items). Role negotiation demonstrated sound psychometric properties in the current study with an internal consistency reliability of $\alpha = .92$.

Positive Framing. Positive framing is measured using three items from Ashford and Black (1996). Respondents will use a 7-point Likert-type scale to identify the degree to which the following statements are appropriate: “Tried to see your situation as an opportunity rather than a threat”, “Tried to look on the bright side of things”, and “Tried to see your situation as a challenge rather than a problem”. Internal consistency reliability was demonstrated with $\alpha = .78$.

Relationship-seeking. Relationship-seeking was measured using the networking ability dimension of the political skill construct (Ferris et al., 2005). Six items measure networking ability were asked and included items such as “I use my connections and network to make things happen at work” and “I spend a lot of time and effort at work networking with others”. Internal consistency reliability was demonstrated ($\alpha = .84$).

Strain

Job Tension. Job tension is measured using six items such as “My job tends to directly affect my health” and “I have felt nervous before attending meetings in the company” (Cook, Hepworth, Wall, & Warr, 1981). In this study, this measure demonstrated a coefficient alpha of .90.

Burnout. Burnout is assessed using the three dimensions of physical fatigue, cognitive weariness, and emotional exhaustion, which are measured in this 14-item Shirom-Melamed Burnout Measure (Melamed et al., 2006). *Physical fatigue* was measured by six items, which include “I feel tired” ($\alpha = .94$); *Cognitive weariness* was measured by five items such as “I have difficulty concentrating” ($\alpha = .95$), and *Emotional exhaustion* includes three items such as “I feel I am not capable of investing emotionally in coworkers and customers” ($\alpha = .88$).

Control Variables

Negative Affectivity. Negative affectivity is measured using Watson, Clark, and Tellegen (1988)'s PANA Scale. The NA subset of this scale contains a list of 10-items measured with using a five-point scale ranging from 1= *very slightly or not at all* to 5=*extremely*. These items include emotions such as irritable, inspired, nervous, enthusiastic, or guilty. In this study, coefficient alpha of .088.

Autonomy. Autonomy has played an important role in stress research, as discussed in Chapter 2 of this study. As such, autonomy will be included as a control variable in this study. Autonomy is measured using Spector and Fox's (2003) 10-item Factual Autonomy Scale. Respondents answer questions regarding how often they ask permission to "change the hours you work", "to take time off" as well as questions such as "How often does someone tell you what you are to do?" Internal consistency reliability was demonstrated ($\alpha = .75$).

Other Measures

In addition to the substantive and control variables, a relatively unrelated measure of materialism was included in this study to determine whether a common method factor is present. A "relatively" unrelated measure was included, as opposed to a completely unrelated measure, to avoid questions being raised in the minds of the participants as to the presence of the particular measure in the survey instrument. A measure of materialism was chosen because it could theoretically be seen as tangentially related to a study of stress and burnout and not raise questions from the participants; however, it is highly unlikely that one's materialism, or belief that happiness and satisfaction is achieved by possession of material objects (Richins, 1987), is theoretically related to one's perception of stressors, engagement in proactive behaviors, and experiences of strain and burnout.

Materialism. Richins (1987) developed a measure of materialism to measure an individual's personal and general belief in materialism. This measure has 6-items including "It is important to me to have really nice things" and "I'd be happier if I could buy really nice things." Internal consistency reliability was demonstrated ($\alpha = .75$).

Data Analysis Techniques

The hypotheses in this study were tested using (1) a moderated structural equation modeling (SEM) measurement model in Mplus (version 6.0) and (2) multivariate general linear modeling (GLM). The hypotheses concerning the main and interaction effects were analyzed using moderated SEM; whereas, those concerning the percentage of variance in the dependent variables explained by independent variables were analyzed using multivariate GLM.

CHAPTER V

RESULTS

In the current study, the level of analysis was at the individual level; however, due to the data collection procedures required by the administrators, the individuals in this study were embedded within supervisor groups. As such, it is likely that supervisor membership could influence individual level outcomes. To account for potential non-independence in the data, I analyzed the hypothesized relationships using Mplus 6.0 (Muthén & Muthén, 2010). Mplus allows for the researcher to correct for deviations from normality that are often present in complex survey samples, such as clustered data, through modeling and estimation algorithms (Asparouhov & Muthén, 2006; Longford & Muthén, 1992). In addition, Maximum Likelihood Robust (MLR) estimation was used when generating parameter estimates and fit statistics, as it is robust to non-independence of the data (Hardin & Hilbe, 2003).

To determine if these analyses were appropriate for my sample, I calculated intraclass correlation coefficient (ICC) values for all variables in the three proposed models. ICC is defined as “the correlation between one measurement (either a single rating or a mean of several ratings) on a target and another measurement obtained on that target” (Shrout & Fleiss, 1979, p.422). There are different types of ICC values, and ICC(1) provides an estimate of the variance in responses at the individual level that can be explained by the properties of the group-level (Bliese & Halverson 1998). In this study, the ICC(1) represents how similar responses are of

individuals with the same supervisor and is calculated by the following equation (Shrout & Fleiss, 1979):

$$= \frac{\text{Between Subjects Mean Square (MSb)} - \text{Within Subjects Mean Square (MSw)}}{\text{MSb} + (n-1)(\text{MSw})}$$

For all of the variables included in the study, the average ICC value is 0.0419, indicating that 4.19% of the variance in responses at the individual level can be explained by supervisor membership (Table 3). This suggests experience unique to one's supervisor does not have a large impact on the results, and it is not necessary to conduct analyses using models and estimation algorithms that correct for supervisor membership.

Table 3

ICC Values for Variables in the Study

Variable	ICC Value
<i>Independent Variables:</i>	
Role Overload	0.0103
Quantitative Task Demands	(0.0228)
Negotiation	(0.2687)
Interpersonal Conflict	0.0568
Networking	(0.1696)
Positive Framing	0.0213
Worry	0.0452
Cognitive Anxiety	0.0035
<i>Dependent Variables:</i>	
Job Tension	0.1657
Physical Fatigue	0.0189
Cognitive Weariness	0.0804
Emotional Exhaustion	0.0045
<i>Control Variables:</i>	
Autonomy	0.0857
Negative Affect	0.0923
<i>Average ICC for Variables in the Study:</i>	0.0419

NOTE: Negative values indicate there is more within supervisor variance than between and were not included in the calculation of Average ICC.

SEM is a true multivariate test and allows for simultaneous regressions to test significance of all pattern coefficients (Anderson & Gerbing, 1988). As such, a large sample size is required. Many recommendations are provided in the literature, including those of Hoyle (1995) and Loehlin (1992) who recommend using sample sizes of 100 to 200 observations. In a recent literature review of studies using SEM, Schumacker and Lomax (2004) found many articles had 250-500 subjects and concluded that researchers are in agreement that fewer than 100-150 observations were not enough and therefore lack power to test significance in SEM.

With a relatively small number of observations, compared with the required sample sizes for SEM, sample size was a concern for this study. As such, three to four parcels were randomly created for each variable, as supported by Landis, Beal, and Tesluk (2000). Two of the measures (i.e., Negotiation and Interpersonal Conflict) had two dimensions each, representing interactions with (a) a supervisor and (b) a coworker. For these measures, two parcels were created for each dimension, so the result was four indicators represented by two parcels from each of the two dimensions.

Anderson and Gerbing (1988) provided guidance on the use of SEM by suggesting a two-step approach to structural equation modeling. The first step consists of performing a confirmatory factor analysis (CFA) to assess measurement properties of the scales. This allows a researcher to perform an item-analysis to check for cross-loadings and reliability issues and to respecify the model if fit indices are too low.

The model-fit statistics can be examined and evidence of good fit between the data and the model can be indicated by a comparative fit index (CFI) and a root mean square error of approximation (RMSEA). In general, models are considered to have good fit with the data when fit indices are greater than .90 and RMSEA less than .08 (e.g., Browne & Cudek, 1989). To

determine whether or not specific hypotheses are supported, the estimates of standardized path coefficients are assessed for statistical significance.

Confirmatory factor analyses were conducted for each of the three hypothesized models (i.e., Task-Oriented Model, Relationship-Oriented Model, and Cognitive-Oriented Model) in Mplus 6.0. The Task-Oriented Model (Model 1; Figure 5) demonstrated good fit ($\chi^2 = 394.370$, $df = 209$, $p = 0.000$, $N=181$, $CFI= 0.923$, $RMSEA= 0.070$). The Relationship-Oriented Model (Model 4, Figure 8) also demonstrated good fit with the data ($\chi^2 = 190.71$, $df = 94$, $p = 0.000$, $N=180$, $CFI= 0.929$, $RMSEA= 0.075$). Finally, the Cognitive-Oriented Model (Model 5, Figure 9) demonstrated excellent fit with the data ($\chi^2 = 278.350$, $df = 155$, $p = 0.0000$, $N=181$, $CFI= 0.951$, $RMSEA=0.066$).

The second step is the construction of the structural model, which is a pictorial representation of the cause and effect relationships between the latent variables (constructs) and includes parameter coefficients and error variances. Even though this path diagram allows the researcher to see the hypothesized causal relationships, no statistical tests, including SEM can determine causality (Bollen, 1989). Bollen (1989) posits that statistical tests cannot prove causality because it is impossible to isolate each variable from everything else. While researchers cannot make definitive statements regarding causality, inferences can be made when certain conditions are met.

Using moderated SEM, fit indices of a structural model are not interpretable with an interaction. To determine whether or not a model fits, the following steps will be completed (Klein & Moosbrugger, 2000). First, the model will be run without the interaction terms to demonstrate fit, and these fit statistics will be reported. Second, the model will be run with the interaction terms. The Akaike (AIC) and Bayesian (BIC) statistics of each model (with and

without the interaction) will be compared. If the model fits the data, the model with the interaction terms should have relatively the same or smaller AIC and BIC values than the original model without the interaction. An interaction effect is supported when the parameter estimate of the interaction is significantly different from zero (Klein & Moosbrugger, 2000; Klein & Stoolmiller, 2003).

In addition to analyses tested in moderated SEM, I also hypothesized which independent variables would explain the most variance found in the dependent variables, consistent with the matching principle. Multivariate GLM allows the researcher to analyze multiple dependent variables, covariates, control variables, and fixed factors simultaneously in multidimensional space, thus reducing the possibility of family wise error, that may be likely if the data was analyzed using numerous regression analyses (Hochberg & Tamhane, 1987; Huberty & Morris, 1989).

Hypothesis Analyses

The proposed hypotheses addressed four types of relationships: (1) main effects between the independent (IV) and dependent (DV) variables, (2) variance of the DVs explained by the main effects of the IVs, (3) moderating effects of proactive behaviors, and (4) the strength of the moderating variables relative to each other.

Main Effects

Hypotheses 1, 2, 5, 6, and 8 represent the predicted main effects between the predictor and criterion variables and are stated below:

Hypothesis 1: Role overload is positively related to (a) job tension and (b) physical fatigue.

Hypothesis 2: Quantitative task demands are positively related to (a) job tension and (b) physical fatigue.

Hypothesis 5: Cognitive anxiety is positively related to cognitive weariness.

Hypothesis 6: Worry is positively related to cognitive weariness.

Hypothesis 8: Interpersonal conflict at work is positively related to emotional exhaustion.

To investigate the main effects of task-, cognitive-, and relationship-oriented role stressors on like-category dependent variables of strain and burnout, the hypotheses were tested using three moderated structural equation models. The first model, the overall Task-Oriented Model (Figure 5), lacked good fit with the data, exhibited by the fit indices of $\chi^2 = 557.539$, $df = 220$, $p = 0.000$, $N = 181$, $CFI = 0.859$, $RMSEA = 0.092$. Additionally, the AIC and BIC fit statistics were 9980.817 and 10233.498, respectively, for the main effects model and 9988.437 and 10253.912, respectively for the interaction model, indicating the fit statistics of the main effects appropriately represent the moderated model. The parameters, unstandardized path coefficients, t-values, and p-values are shown in Table 4. See Appendix D for a summary of fit statistics for all models included in the study.

As the results indicate, the model does not adequately fit the data nor are its results theoretically and empirically consistent. In this case, it is likely that the potential reason for these inconsistencies is multicollinearity between the two like-category task-oriented stressors (i.e., role overload and quantitative task demands). As such, two models were run separately for all Task-Oriented Model analyses to eliminate this potential problem. Model 2 – Task-Oriented Model with Role Overload (Figure 6) includes role overload and its relationships. This model demonstrates a better fit than the original Task-Oriented Model ($\chi^2 = 370.929$, $df = 145$, $p =$

0.000, N= 181, CFI= 0.894, RMSEA= 0.093). A similar fit was found for Model 3 – Task-Oriented Model with Quantitative Task Demands (Figure 7), indicated by the following fit statistics: $\chi^2 = 410.252$, $df = 163$, $p = 0.000$, N=181, CFI= 0.887, RMSEA= 0.092.

Support was shown for Hypotheses 1a, 1b, 2a, and 2b. More specifically, role overload is positively related to job tension (Table 5; $\beta = 1.221$, $t = 5.023$, $p < 0.01$) and physical fatigue ($\beta = 1.261$, $t = 3.992$, $p < 0.01$), which provided support for Hypotheses 1a and 1b. The relationship between quantitative task demands (QTD) and job tension (Table 6; $\beta = 2.193$, $t = 3.252$, $p < 0.01$), as well as the relationship between QTD and physical fatigue ($\beta = 1.946$, $t = 3.132$, $p < 0.01$) are significant, providing support for Hypotheses 2a and 2b.

Figure 5

Model 1 - Task-Oriented Model Results

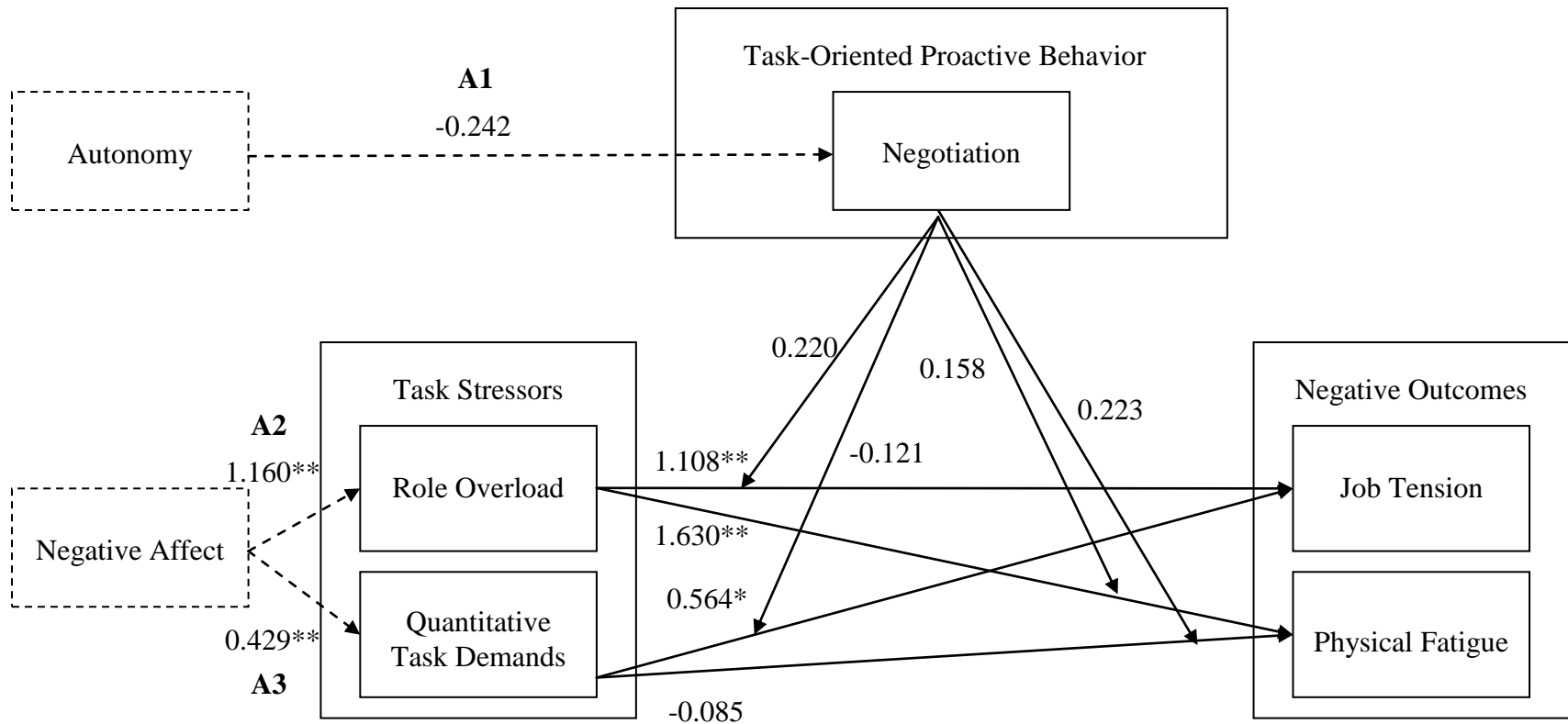


Table 4

Model 1 - Task-Oriented Model Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value
1.A1	Autonomy --> Negotiation	-0.242	-1.855	0.064
1.A2	NA --> Role Overload	1.160	3.726	0.000 **
1.A3	NA --> Quantitative Task Demands	0.492	2.986	0.003 **
H1a	Role Overload --> Job Tension	1.108	3.806	0.000 **
H1b	Role Overload --> Physical Fatigue	1.630	3.328	0.001 **
H2a	Quantitative Task Demands --> Job Tension	0.564	2.378	0.017 *
H2b	Quantitative Task Demands --> Physical Fatigue	-0.085	-0.359	0.719
H10a	Role Overload x Negotiation --> Job Tension	0.220	0.779	0.436
H10b	Quantitative Task Demands x Negotiation --> Job Tension	-0.121	-0.349	0.727
H12a	Role Overload x Negotiation --> Physical Fatigue	0.158	0.606	0.545
H12b	Quantitative Task Demands x Negotiation --> Physical Fatigue	0.223	0.692	0.489

* Significant at $p < 0.05$ level (2-tailed)

** Significant at $p < 0.01$ level (2-tailed)

Figure 6

Model 2 - Task-Oriented Model with Role Overload Results

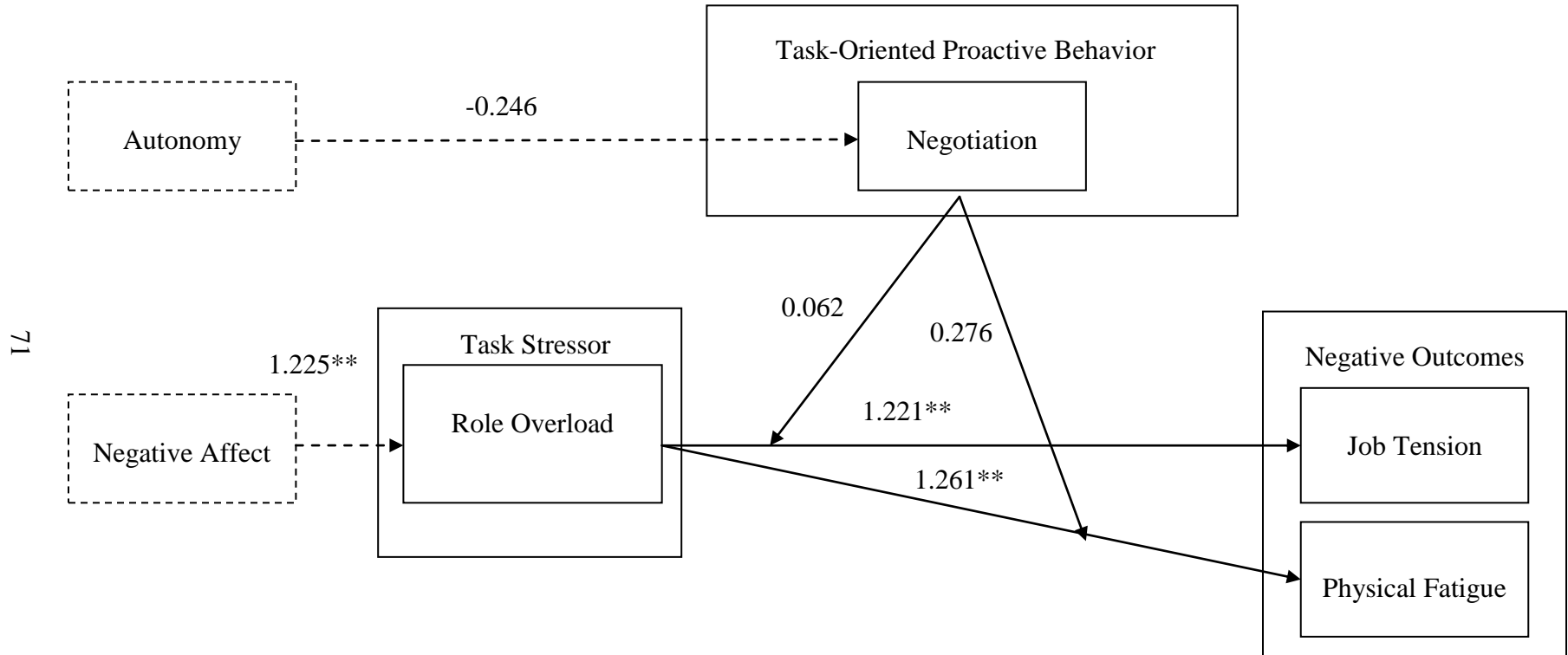


Figure 7

Model 3 - Task-Oriented Model with Quantitative Task Demands Results

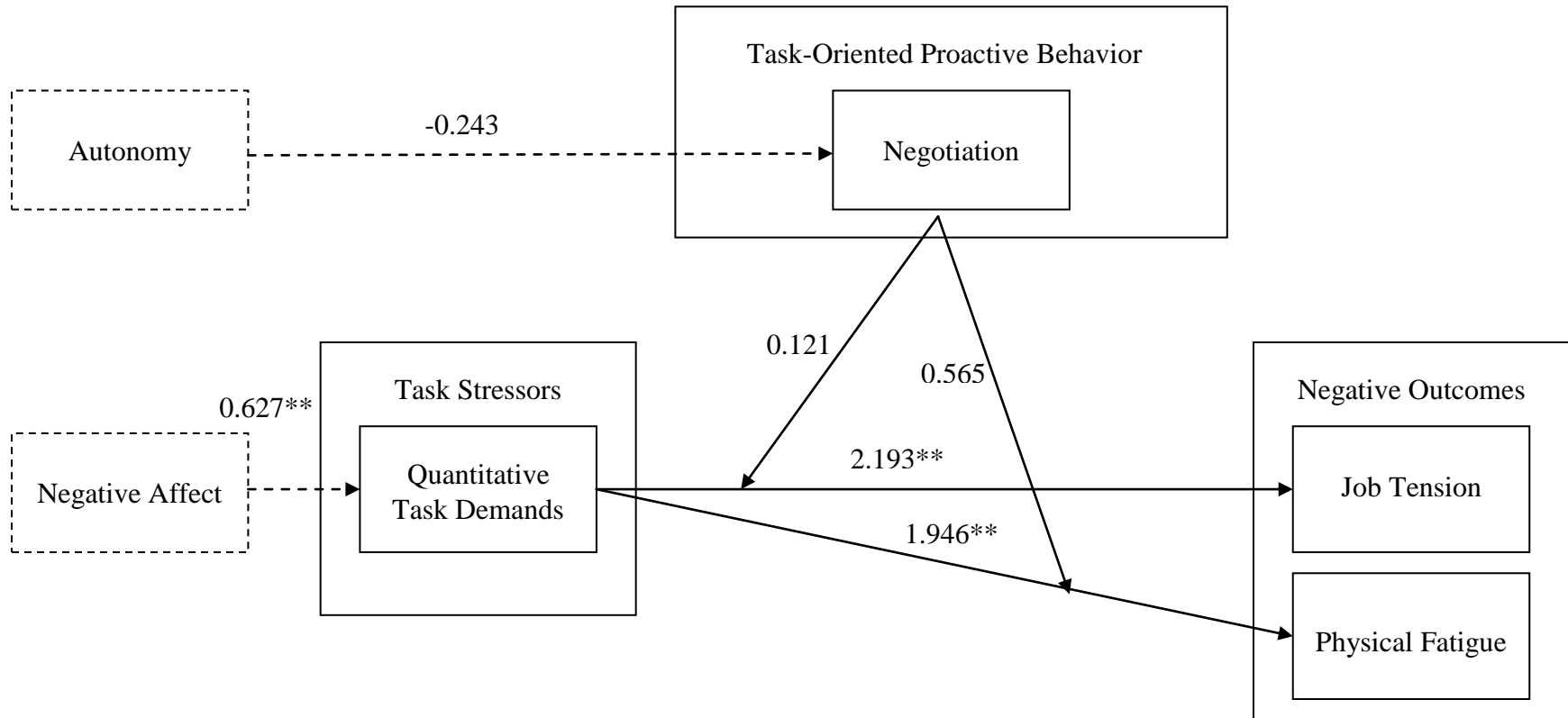


Table 5

Model 2 - Task-Oriented Model with Role Overload Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value
2.A1	Autonomy --> Negotiation	-0.246	-1.632	0.103
2.A2	NA --> Role Overload	1.225	4.862	0.000 **
H1a	Role Overload --> Job Tension	1.221	5.023	0.000 **
H1b	Role Overload --> Physical Fatigue	1.261	3.992	0.000 **
H10a	Role Overload x Negotiation --> Job Tension	0.062	0.369	0.712
H12a	Role Overload x Negotiation --> Physical Fatigue	0.276	1.204	0.229

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)

Table 6

Model 3 - Task-Oriented Model with Quantitative Task Demands Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value
3.A1	Autonomy --> Negotiation	-0.243	-1.900	0.057
3.A3	NA --> Quantitative Task Demands	0.627	5.112	0.000 **
H2a	Quantitative Task Demands --> Job Tension	2.193	3.252	0.001 **
H2b	Quantitative Task Demands --> Physical Fatigue	1.946	3.132	0.002 **
H10b	Quantitative Task Demands x Negotiation --> Job Tension	0.121	0.245	0.806
H12b	Quantitative Task Demands x Negotiation --> Physical Fatigue	0.565	1.269	0.204

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)

Next, the Cognitive-Oriented Model (Model 4; Figure 8) was tested to understand relationships between the cognitive-oriented stressors, proactive behavior, and burnout. The model demonstrated good fit with the data ($\chi^2=362.382$, $df=182$, $p=0.000$, $N=180$, $CFI=0.906$, $RMSEA=0.084$). Parameter estimates, t -values, and p -values are provided in Table 7. Similar to the Task-Oriented model, the Cognitive-Oriented Model tested multiple like-category stressors and provided the opportunity for multicollinearity. The two cognitive stressors, cognitive anxiety and worry, were tested separately to avoid such problems.

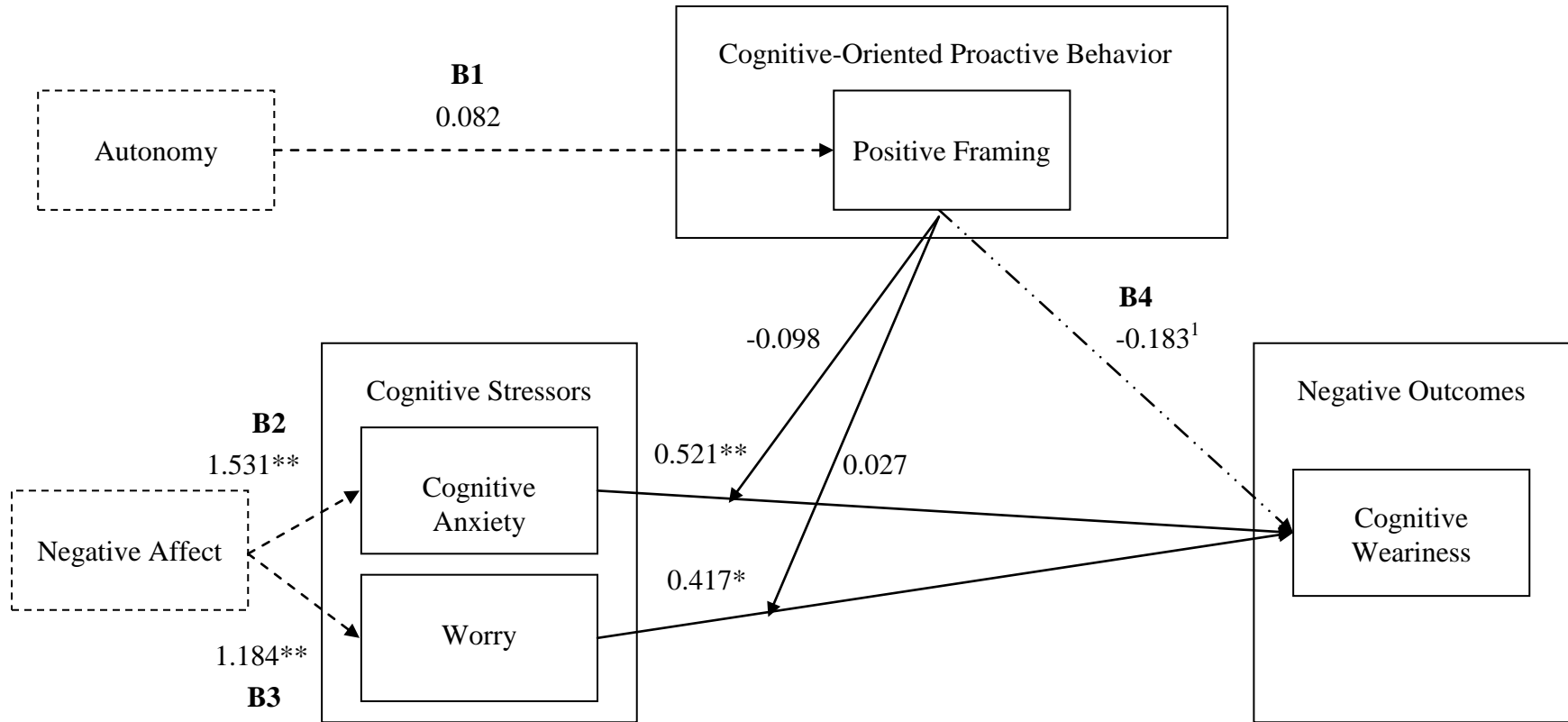
Both the cognitive anxiety- and worry-only models demonstrated excellent fit with the data. Model 5 – Cognitive-Oriented Model with Cognitive Anxiety (Figure 9, Table 8) demonstrated the following fit statistics: $\chi^2=224.298$, $df=114$, $p=0.000$, $N=181$, $CFI=0.947$, $RMSEA=0.073$. Model 6 – Cognitive-Oriented Model with Worry (Figure 10, Table 9) exhibited fit statistics of $\chi^2=243.567$, $df=130$, $p=0.000$, $N=181$, $CFI=0.950$, $RMSEA=0.069$.

For the main effects in the cognitive model, the estimates of the path coefficients showed support for both Hypotheses 5 and 6, as cognitive anxiety ($\beta=0.763$, $t=6.427$, $p<0.01$) and worry ($\beta=0.895$, $t=6.631$, $p<0.01$) are both positively related to the cognitive dimension of burnout (i.e., cognitive weariness).

Finally, the Relationship-Oriented Model (Model 7; Figure 11) demonstrated good fit with the data, exhibited by the fit indices of $\chi^2=225.943$, $df=99$, $p=0.000$, $N=180$, $CFI=0.906$, $RMSEA=0.084$. However, the path between interpersonal conflict and emotional exhaustion was not significant ($\beta=1.401$, $t=0.601$, $p=0.548$); therefore, Hypothesis 8 was not supported. See Table 10 for parameter estimates and statistics.

Figure 8

Model 4 – Cognitive-Oriented Model Results



NOTE: Dashed and dotted lines represent significant paths between moderator and DV which were not hypothesized.

Table 7

Model 4 – Cognitive-Oriented Model Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value	
4.B1	Autonomy --> Positive Framing	0.082	0.607	0.544	
4.B2	NA --> Cognitive Anxiety	1.531	6.216	0.000	**
4.B3	NA --> Worry	1.184	8.157	0.000	**
H5	Cognitive Anxiety --> Cognitive Weariness	0.521	3.200	0.001	**
H6	Worry --> Cognitive Weariness	0.417	2.211	0.027	*
H14a	Cognitive Anxiety x Positive Framing --> Cognitive Weariness	-0.098	-0.536	0.592	
H14b	Worry x Positive Framing --> Cognitive Weariness	0.027	0.146	0.884	
4.B4	Positive Framing --> Cognitive Weariness	-0.183	-1.408	0.159	¹

* Significant at $p < 0.05$ level (2-tailed)

** Significant at $p < 0.01$ level (2-tailed)

¹Significant at $p < 0.100$ (1-tailed) in expected direction.

Figure 9

Model 5 - Cognitive-Oriented Model with Cognitive Anxiety Results

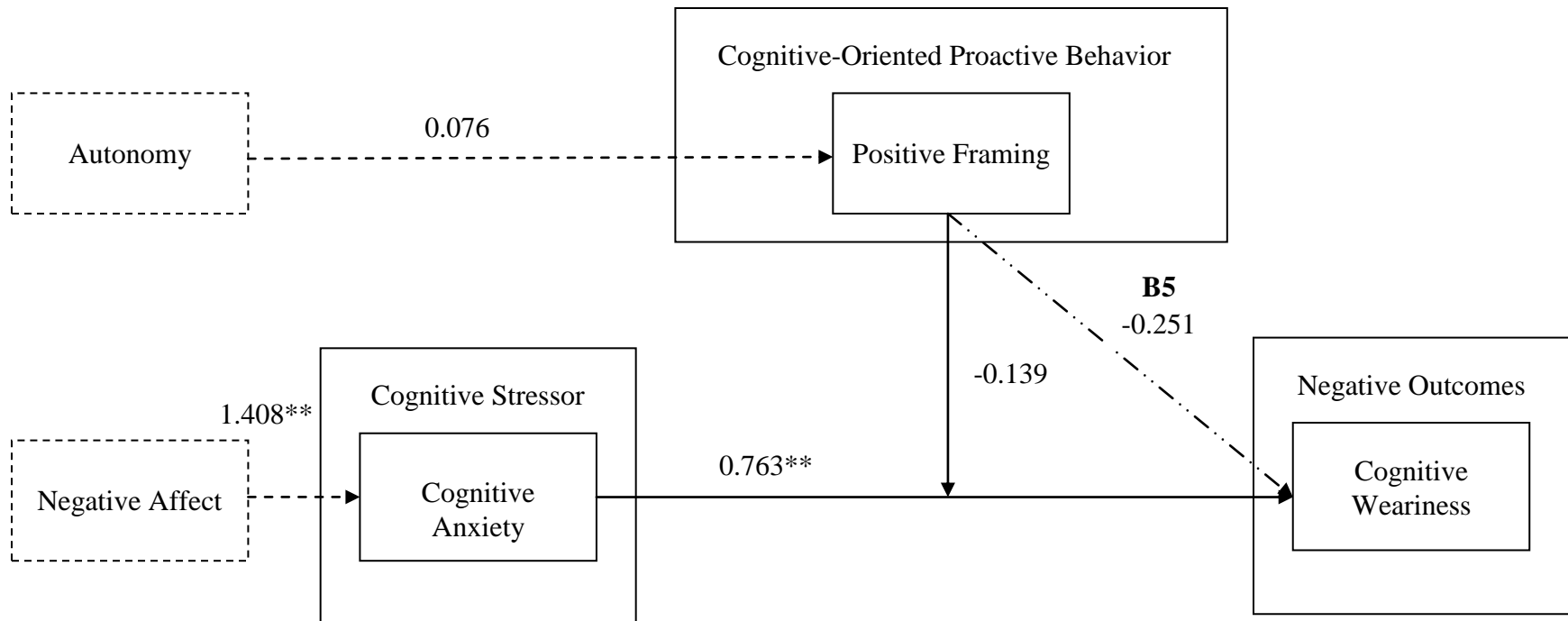


Figure 10

Model 6 – Cognitive-Oriented Model with Worry Results

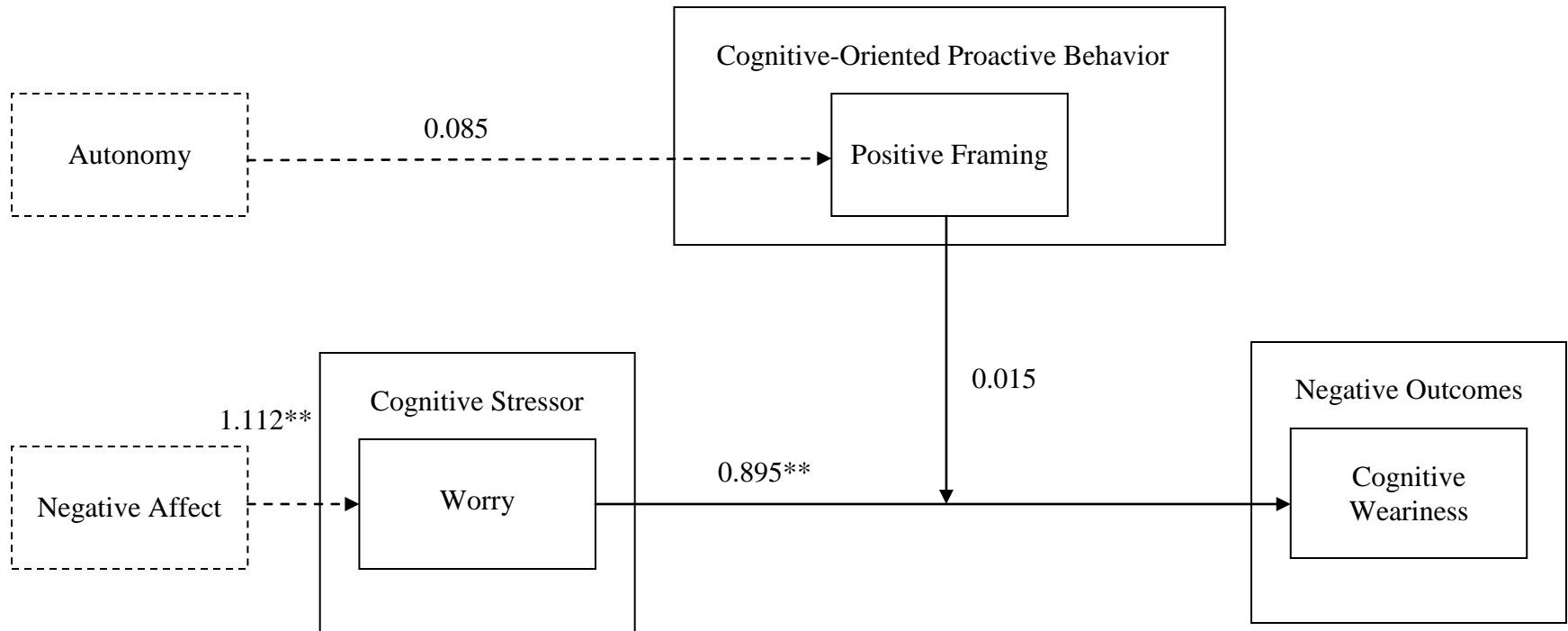


Table 8

Model 5 – Cognitive-Oriented Model with Cognitive Anxiety Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value	
5.B1	Autonomy --> Positive Framing	0.076	0.565	0.572	
5.B2	NA --> Cognitive Anxiety	1.408	6.254	0.000	**
H5	Cognitive Anxiety --> Cognitive Weariness	0.763	6.427	0.000	**
H14a	Cognitive Anxiety x Positive Framing --> Cognitive Weariness	-0.139	-0.856	0.392	
5.B5	Positive Framing --> Cognitive Weariness	-0.251	-1.946	0.052	²

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)²Significant at $p < 0.05$ level (1-tailed)

Table 9

Model 6 – Cognitive-Oriented Model with Worry Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value	
6.B1	Autonomy --> Positive Framing	0.085	0.624	0.533	
6.B3	NA --> Worry	1.112	8.256	0.000	**
H6	Worry --> Cognitive Weariness	0.895	6.631	0.000	**
H14b	Worry x Positive Framing --> Cognitive Weariness	0.015	0.098	0.922	

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)

Figure 11

Model 7 – Relationship-Oriented Model Results

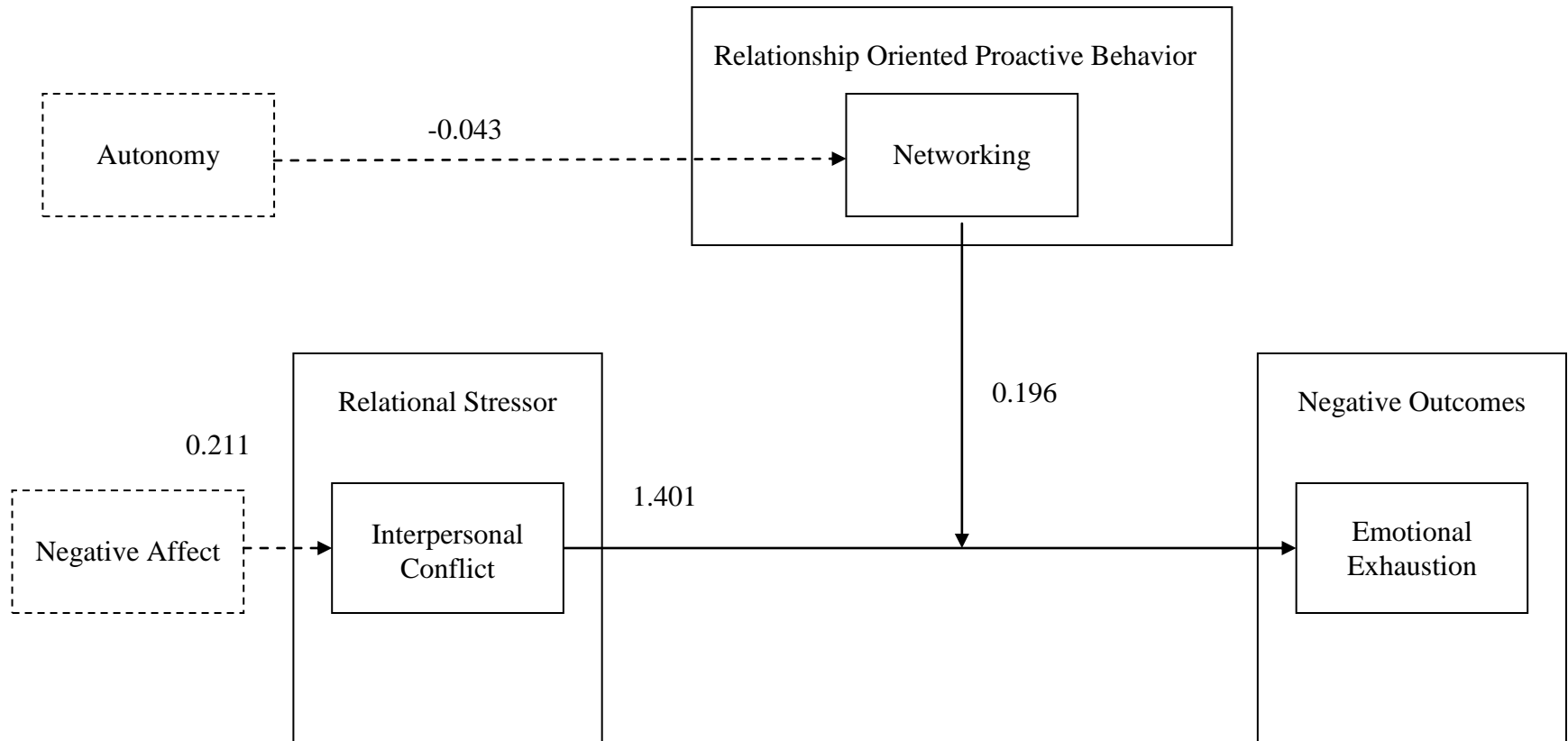


Table 10

Model 7 – Relationship-Oriented Model Parameter Estimates

Path	Parameter	(β) Coefficient	t-value	<i>p</i> value
7.C1	Autonomy --> Networking	-0.043	-0.295	0.768
7.C2	NA --> Interpersonal Conflict	0.211	0.990	0.322
H8	Interpersonal Conflict --> Emotional Exhaustion	1.401	0.601	0.548
H16	Interpersonal Conflict x Networking --> Emotional Exhaustion	0.196	0.394	0.694

* Significant at $p < 0.05$ level (2-tailed)

** Significant at $p < 0.01$ level (2-tailed)

Variance of DVs Explained by IVs

Hypotheses 3, 4, 7, and 9 predicted the strength of the hypothesized main effects, consistent with the matching principle described in Chapter Three. The hypotheses stated:

Hypothesis 3: The largest percentage of variance in job tension will be explained by (a) role overload and (b) quantitative task demands.

Hypothesis 4: The largest percentage of variance in physical fatigue will be explained by (a) role overload and (b) quantitative task demands.

Hypothesis 7: The largest percentage of variance in cognitive weariness will be explained by (a) cognitive anxiety and (b) worry.

Hypothesis 9: The largest percentage of variance in emotional exhaustion will be explained by interpersonal conflict.

To investigate the variance of the dependent variables which was explained by the predictors, two models were run using multivariate GLM. Due to the potential multicollinearity of multiple like-category stressors, two analyses were run to separate the two task-related stressors (i.e., role overload and QTD) as well as the two cognitive-related stressors (i.e., cognitive anxiety and worry). For each test, job tension, physical fatigue, cognitive weariness, and emotional exhaustion were entered as dependent variables. In the first analysis, role overload, cognitive anxiety, interpersonal conflict as well as control variables of autonomy and negative affect were entered as covariates. In the second, QTD, worry, interpersonal conflict, autonomy, and negative affect were included as covariates. Results are shown in Tables 11 and 12, respectively.

Table 11

Multivariate GLM Analysis 1 (Role Overload and Cognitive Anxiety) Results

Dependent Variable	Parameter	β	t-value	p-value		Partial Eta Squared (η^2)
<i>Job Tension</i>						
	Role Overload	0.401	4.678	0.000	**	0.161
	Cognitive Anxiety	0.201	1.528	0.129		0.020
	Interpersonal Conflict	0.706	2.343	0.021	*	0.046
<i>Physical Fatigue</i>						
	Role Overload	0.323	3.170	0.002	**	0.081
	Cognitive Anxiety	0.289	1.850	0.067		0.029
	Interpersonal Conflict	-0.251	-0.703	0.484		0.004
<i>Cognitive Weariness</i>						
	Role Overload	0.262	3.428	0.001	**	0.093
	Cognitive Anxiety	0.372	3.176	0.002	**	0.081
	Interpersonal Conflict	-0.726	-2.706	0.008	**	0.060
<i>Emotional Exhaustion</i>						
	Role Overload	0.159	2.122	0.011	*	0.038
	Cognitive Anxiety	0.380	3.322	0.001	**	0.088
	Interpersonal Conflict	-0.027	-0.103	0.919		0.000

* Significant at $p < 0.05$ level** Significant at $p < 0.01$ level

Table 12

Multivariate GLM Analysis 2 (Quantitative Task Demands and Worry) Results

Dependent Variable	Parameter	β	t-value	p-value		Partial Eta Squared (η^2)
<i>Job Tension</i>						
	QTD	0.852	5.340	0.000	**	0.212
	Worry	0.488	2.683	0.008	**	0.064
	Interpersonal Conflict	0.719	2.369	0.020	*	0.050
<i>Physical Fatigue</i>						
	QTD	0.321	1.632	0.106		0.024
	Worry	0.617	2.756	0.007	**	0.067
	Interpersonal Conflict	0.359	0.961	0.339		0.009
<i>Cognitive Weariness</i>						
	QTD	0.272	1.710	0.090		0.027
	Worry	0.331	1.824	0.071		0.030
	Interpersonal Conflict	-0.472	-1.560	0.122		0.022
<i>Emotional Exhaustion</i>						
	QTD	0.373	2.471	0.015	*	0.054
	Worry	-0.084	-0.486	0.628		0.002
	Interpersonal Conflict	-0.780	-0.271	0.787		0.001

* Significant at $p < 0.05$ level** Significant at $p < 0.01$ level

Hypotheses were tested by comparing the partial η^2 , which represents the variance of the DV explained by the parameter. When considering both models, the paths between IVs and job tension were significant for role overload ($p < 0.01$), QTD ($p < 0.01$), worry ($p < 0.01$), and interpersonal conflict ($p < 0.05$). Partial η^2 for each of the independent variables is as follows: role overload (0.161), QTD (0.212), worry (0.064), and interpersonal conflict (0.50). Thus, Hypotheses 3a and 3b are supported, with (H3a) role overload explaining 16.1 % of the variance in job tension and (H3b) QTD explaining 21.2%.

The variance in physical fatigue explained by the predictors in the study was significant for role overload and worry at the $p < 0.01$ level. Role overload explained 8.1% of the variance in physical fatigue, supporting Hypothesis 4a; however, QTD did not account for a significant portion of the variance in the physical fatigue dimension of burnout, thus no support was found for Hypothesis 4b. Worry explained 6.7% of the variance in physical fatigue.

For cognitive weariness, role overload, cognitive anxiety, and interpersonal conflict explain the most variance. The coefficients for these parameters are significant at the $p < 0.01$ level. It was hypothesized that the largest percentage of variance in cognitive weariness is explained by (H7a) cognitive anxiety and (H7b) worry. Role overload explained the most variance in cognitive weariness by accounting for 9.3%. Cognitive anxiety explained 8.1% of the variance, supporting Hypothesis 7a. However, Hypothesis 7b was not supported as worry only explained 3.0% of the variance in the cognitive weariness burnout dimension.

Finally, the most variance in emotional exhaustion is explained cognitive anxiety (8.8%), QTD (5.4%), and role overload (3.8%), failing to provide support for Hypothesis 9. This is consistent with the results in moderated SEM, as interpersonal conflict at work was not significantly and positively related to emotional exhaustion.

Moderating Effects

Hypotheses 10, 12, 14, and 16 test the moderating effects of proactive behaviors in the stress process, according to the triple matching principle. The moderating effects were tested in the same models as described in the discussion of the main effects analyses earlier. Interaction terms were also included in the analyses, allowing for a moderating effect to be modeled in the path analysis. The hypotheses included the following:

Hypothesis 10: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be neutralized.

Hypothesis 12: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be neutralized.

Hypothesis 14: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be neutralized.

Hypothesis 16: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be neutralized.

The task-related models are represented by Model 2 and Model 3. In Model 2 (Figure 6, Table 5), two interaction terms were included representing the effects of the role of negotiation on the role overload – job tension relationship ($\beta = 0.062$, $t = 0.369$, $p = 0.712$) and on the role overload – physical fatigue relationship ($\beta = 0.276$, $t = 1.204$, $p = 0.229$). Similarly, Model 3 (Figure 7, Table 6), represented the interactive effects of negotiation on the QTD – job tension relationship ($\beta = 0.121$, $t = 0.245$, $p = 0.806$) and on the QTD-physical fatigue relationship ($\beta = 0.565$, $t = 1.269$, $p = 0.204$). None of the parameters were statistically different from zero, failing to provide support for Hypotheses 10a and 10b. Furthermore, the effects of negotiation on the stress process are not in the hypothesized direction, suggesting negotiation is more likely to

exacerbate the negative relationship between stressors and strain and burnout rather than neutralize the negative effects of stress.

The effectiveness of the cognitive-oriented proactive behavior, positive framing, was tested in Model 5 (Figure 9, Table 8) and Model 6 (Figure 10, Table 9). In Model 5, the moderating effect of positive framing on the cognitive anxiety-cognitive weariness relationship ($\beta = -0.139$, $t = -0.856$, $p = 0.392$). While this effect was not significant, and therefore failed to support Hypothesis 14a, it is in the expected direction of neutralizing negative effects of cognitive anxiety on cognitive weariness. Additionally, there is a direct negative, and significant, relationship between positive framing and cognitive weariness (Path B5) at the $p < 0.05$ level (one-tailed). This relationship is in the expected direction; therefore, a one-tailed test is appropriate.

In Model 6, the effectiveness of positive framing on the relationship between worry and positive framing was tested. The parameter estimate of the interaction was not significant ($\beta = 0.015$, $t = 0.098$, $p = 0.922$), failing to support Hypothesis 14b. Furthermore, the relationship is not in the expected direction, suggesting positive framing may exacerbate the negative effects of worry on the cognitive weariness dimension of burnout.

The relationship-oriented model is depicted in Model 7 (Figure 11, Table 10). Hypothesis 15 is not supported as networking does not moderate the relationship between interpersonal conflict and emotional exhaustion ($\beta = 0.196$, $t = 0.394$, $p = 0.694$).

Overall, this study does not support the triple matching principle as none of the like-category proactive behaviors tested moderated the same-category stressor-strain relationship. Additionally, of the seven hypothesized interactions, only one was in the expected direction. As such, it is unnecessary to test Hypotheses 11, 13, 15, and 17, which propose the moderating

effects in matched models will be stronger than models where a different form of proactive behaviors is used as a coping mechanism. In this study, Hypotheses 11, 13, 15, and 17 are not supported. These hypotheses state:

Hypothesis 11: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be most effectively neutralized.

Hypothesis 13: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be most effectively neutralized.

Hypothesis 15: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be most effectively neutralized.

Hypothesis 17: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated most strongly by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be most effectively neutralized.

Competing Models

Although competing models testing the moderating effects of non-matched proactive behaviors on like-category stressors and strain were not explicitly stated in the hypotheses, analysis of these models were implied in Hypotheses 11, 13, 15, and 17. Ten additional models were tested using moderated SEM. Figures of the competing models (Models 8 – 17) are included in Appendix E and the parameter estimates are shown in Appendix F.

A summary of the moderating effects included in the competing models are shown in Table 13. In summary, positive framing, the cognitive-oriented proactive behavior included in this study, appears to be the most effective neutralizer of the negative effects of stressors on strain and burnout. In all five of the competing moderating effects, the data show the moderating effect is in the hypothesized direction. For two of these five, the moderating effect of positive framing with role overload on physical fatigue ($\beta = -0.170$, $t = -1.282$, $p = 0.200$) and with QTD on physical fatigue ($\beta = -0.467$, $t = -1.520$, $p = 0.128$) are marginally significant at $p < 0.100$ level in a one-tailed test. As the relationships are in the expected direction, a one-tailed test is appropriate.

Networking, the relationship-oriented proactive behavior, showed mixed results as a moderator of the stressor-strain relationship in the competing models. While none of the interaction terms were significantly different than zero, three of the six were in the expected direction. While non-significant, interaction terms including negotiation, task-oriented proactive behavior, were in the opposite direction of what was expected, indicating negotiation may exacerbate the stressor-strain relationship.

The two marginally significant interactions are graphically illustrated in Figures 12 and 13 below. The graphs were created by plotting two levels of positive framing: high at one standard deviation above the mean and low at one standard deviation below the mean.

Figure 12

Effects of Positive Framing on the Role Overload – Physical Fatigue Relationship

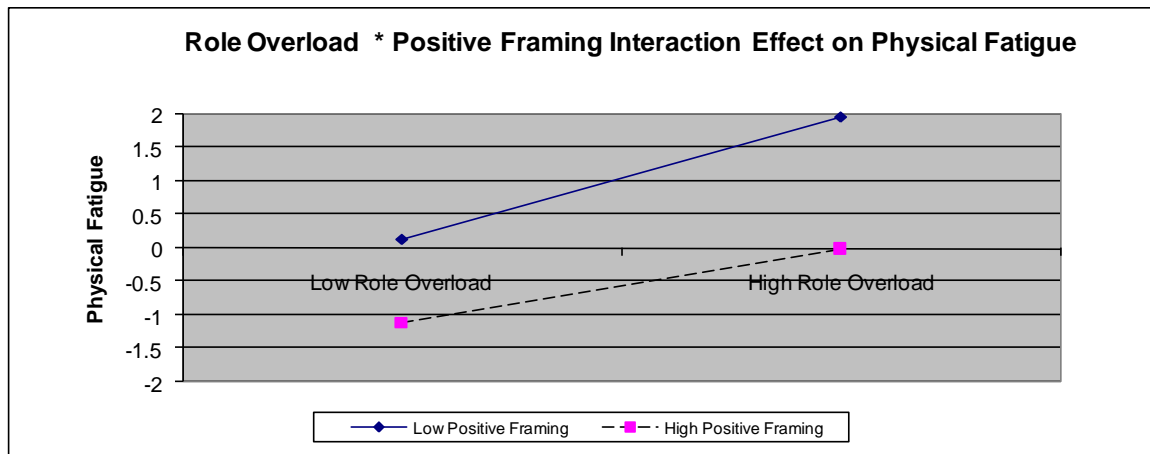


Figure 13

Effects of Positive Framing on the QTD – Physical Fatigue Relationship

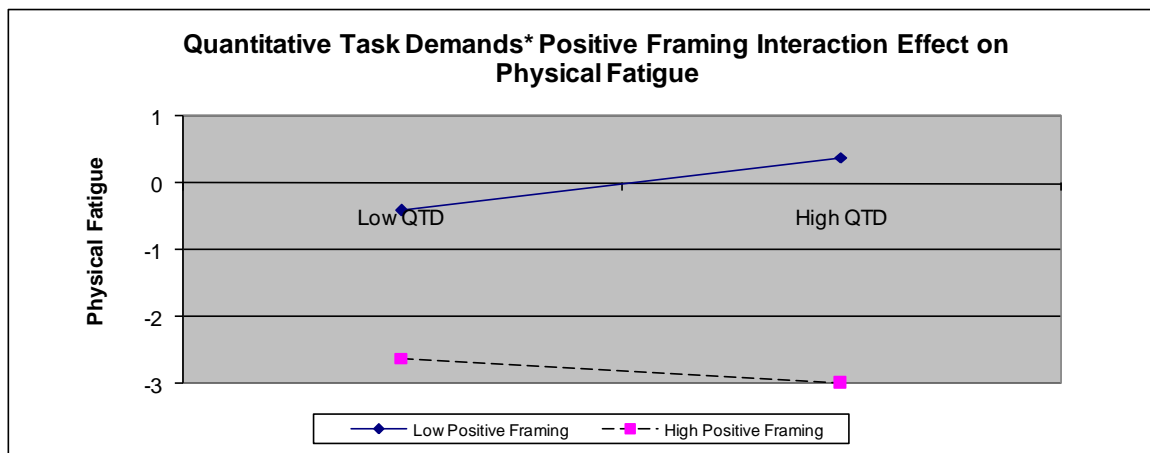


Table 13

Parameter Estimates of the Competing Models (Interaction Terms)

Model	Path	Parameter	β	t-value	p-value	
8	A4	Role Overload x Positive Framing --> Job Tension	-0.080	-0.669	0.504	
	A5	Role Overload x Positive Framing --> Physical Fatigue	-0.170	-1.282	0.200	¹
9	A7	QTD x Positive Framing --> Job Tension	-0.330	-1.064	0.287	
	A8	QTD x Positive Framing --> Physical Fatigue	-0.467	-1.520	0.128	¹
10	A10	Role Overload x Networking --> Job Tension	-0.103	-0.807	0.420	
	A11	Role Overload x Networking --> Physical Fatigue	0.165	1.147	0.252	
11	A12	QTD x Networking --> Job Tension	0.157	0.536	0.592	
	A13	QTD x Networking --> Physical Fatigue	0.156	0.587	0.557	
12	B6	Cognitive Anxiety x Negotiation --> Cognitive Weariness	0.100	0.383	0.702	
13	B7	Worry x Negotiation --> Cognitive Weariness	0.089	0.415	0.678	
14	B8	Cognitive Anxiety x Networking --> Cognitive Weariness	-0.205	-1.214	0.225	
15	B9	Worry x Networking --> Cognitive Weariness	-0.010	-0.058	0.954	
16	C4	Interpersonal Conflict x Negotiation --> Emotional Exhaustion	0.256	0.100	0.920	
17	C5	Interpersonal Conflict x Positive Framing --> Emotional Exhaustion	-0.374	-0.294	0.769	

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)¹Significant at $p < 0.100$ (1-tailed)

Summary

Analyses for the hypotheses developed in Chapter Three were presented in this chapter, and the results were partially supported. A summary of these hypotheses is shown in Table 14. Considering the main effects only, it is suggested that matching does play a role in the stressor-strain relationship, as 10 of the 14 hypotheses related to the matching of stressors – strains and the strength of these relationships were supported. Specifically, role overload and quantitative task demands were shown to be significantly and positively related to the task-related outcomes of job tension and the physical fatigue dimension of burnout. Cognitive anxiety and worry are significantly and positively related to the cognitive weariness dimension of burnout. As hypothesized the largest percentage of variance in job tension was explained by task-related stressors of role overload and QTD, and the largest percentage of variance in task-related physical fatigue was explained by role overload. While the moderation hypotheses consistent with the triple match principle were not supported, one of seven non-significant interactions would appear to be in the direction hypothesized.

Analyses for competing models implied in the “Strength of Moderating Effects” hypotheses yielded a bigger picture of the results. Positive framing is the only moderator included in this study demonstrating significant interactions in any model. Additionally, the effects of positive framing are in the expected direction across all competing models. The interaction effects of networking appear mixed; however, none were significantly different from zero. Negotiation consistently demonstrated opposite effects from those expected across hypothesized and competing models.

Discussion of these results, implications of these results in the stress and proactive behavior literatures, the strengths and limitations of this study, and directions for future research are described in Chapter Six.

Table 14

Results of the Current Study

Hypothesis		Result
H1a	Role Overload --> Job Tension	<i>Supported</i>
H1b	Role Overload --> Physical Fatigue	<i>Supported</i>
H2a	Quantitative Task Demands --> Job Tension	<i>Supported</i>
H2b	Quantitative Task Demands --> Physical Fatigue	<i>Supported</i>
H3a	% Job Tension variance explained by Role Overload	<i>Supported</i>
H3b	% Job Tension variance explained by Quantitative Task Demands	<i>Supported</i>
H4a	% Physical Fatigue variance explained by Role Overload	<i>Supported</i>
H4b	% Physical Fatigue variance explained by Quantitative Task Demands	<i>Not Supported</i>
H5	Cognitive Anxiety --> Cognitive Weariness	<i>Supported</i>
H6	Worry --> Cognitive Weariness	<i>Supported</i>
H7a	% Cognitive Weariness variance explained by Cognitive Anxiety	<i>Supported</i>
H7b	% Cognitive Weariness variance explained by Worry	<i>Not Supported</i>
H8	Interpersonal Conflict --> Emotional Exhaustion	<i>Not Supported</i>
H9	% Emotional Exhaustion variance explained by Interpersonal Conflict	<i>Not Supported</i>
H10a	Role Overload x Negotiation --> Job Tension	<i>Not Supported</i>
H10b	Quantitative Task Demands x Negotiation --> Job Tension	<i>Not Supported</i>
H11a	Role Overload x Negotiation --> Job Tension (Strongest Effects)	<i>Not Supported</i>
H11b	Quantitative Task Demands x Negotiation --> Job Tension (Strongest Effects)	<i>Not Supported</i>
H12a	Role Overload x Negotiation --> Physical Fatigue	<i>Not Supported</i>
H12b	Quantitative Task Demands x Negotiation --> Physical Fatigue	<i>Not Supported</i>
H13a	Role Overload x Negotiation --> Physical Fatigue (Strongest Effects)	<i>Not Supported</i>
H13b	Quantitative Task Demands x Negotiation --> Physical Fatigue (Strongest Effects)	<i>Not Supported</i>
H14a	Cognitive Anxiety x Positive Framing --> Cognitive Weariness	<i>Not Supported</i>
H14b	Worry x Positive Framing --> Cognitive Weariness	<i>Not Supported</i>
H15a	Cognitive Anxiety x Positive Framing --> Cognitive Weariness (Strength)	<i>Not Supported</i>
H15b	Worry x Positive Framing --> Cognitive Weariness (Strength)	<i>Not Supported</i>
H16	Interpersonal Conflict x Networking --> Emotional Exhaustion	<i>Not Supported</i>
H17	Interpersonal Conflict x Networking --> Emotional Exhaustion (Strength)	<i>Not Supported</i>

CHAPTER VI

DISCUSSION

The overall purpose of this study is to examine the use and effectiveness of proactive behaviors as coping mechanisms in the stress process. Past research has taken a very isolated approach considering single proactive behaviors with individual studies. As a result, our knowledge of proactive behaviors is limited. Uncertainties remain such as understanding the role proactive behaviors play in neutralizing experiences of stress and their effectiveness in this role, whether this neutralization is dependent upon the form of proactive behavior exhibited, and the directionality of the stressor-proactive behavior relationship. Through this study, I began to address some of these previously unanswered questions and discovered new questions for future research.

In this chapter, the results of the data analyses conducted are discussed. First, the implications of the findings are discussed for the stress and proactive behavior literatures. Next strengths of the current study are presented and limitations are discussed. Finally, directions for future research are provided.

Implications for Stress and Proactive Behaviors

The results presented in Chapter Five indicate proactive behaviors may either neutralize or exacerbate negative consequences of the stress process, and the direction of their effects may not be consistent with a triple-matching principle. When considering the main effects of stressors

on strain (i.e., job tension) and dimensions of burnout, four of six hypotheses predicting percentage of variance in the criterion would be most largely explained by like-category stressors were supported. This suggests that the matching principle is useful when predicting effects of like-category stressors on strain and burnout. However, the results of the current study suggest the triple matching principle may not have the same predictive validity as no hypothesized interactions were significant, and only one of seven relationships would seem to be in the hypothesized direction. These findings have several implications for both stress and proactive behavior research.

First and most notably, this study incorporated two ways of matching predictor and criterion variables: a matching of like-categories and a matching of bandwidth. First, the triple match principle, which has recently been suggested in the stress literature, suggests that a matching of stressors, coping behaviors, and strains will yield the most effective neutralization of strain (de Jonge & Dormann, 2006). A matching of bandwidth in predictor and criterion variables (i.e., narrow with narrow or broad with broad) will result in greater predictive validity than using very narrow predictors to predict broad outcomes, such as job satisfaction. As such, narrow predictors and criterion variables were chosen in this study.

Overall, the results of this study do not support the triple matching principle; however, results more consistently supported a matching of bandwidth. The competing models, with unmatched moderators, yielded results more consistent with neutralization of stress than did matched hypothesized models. From this study, it is suggested that stress researchers will receive a greater benefit from considering bandwidth matching than category matching in future studies.

Through the bandwidth-fidelity arguments in the personality and selection literatures, bandwidth matching is theoretically and empirically sound (e.g., Cronbach & Gleser, 1957;

Hogan et al., 1996; Schneider et al., 1996). Through an examination of past stress literature, it is also practically relevant. Individuals often experience stressors of various categories; however, they may not have an option to choose a resource to match. For example, an individual may experience interpersonal conflict with a coworker, but he/she is assigned to a project with said coworker. Relationship-oriented coping mechanisms, such as networking, may not be relevant; however, a cognitive-oriented strategy will be. Past research suggests that non-problem solving coping strategies, such as emotion-focused (or meaning-focused) mechanisms, may be the only strategies available for minimizing work stressors (e.g., Dewe, 1992; Pearlin & Schooler, 1978).

Second, the most consistent ineffective proactive behavior in this study is negotiation. Previous research in the socialization literature has shown negotiation was an effective resource used by newcomers in organizations to gain control in their new positions and more quickly overcome ambiguity (e.g., Dawis & Lofquist, 1978; Griffin et al., 2000; Nicholson, 1984); however, these studies did not include individuals already established in their roles and careers within the organization.

While job-change negotiation for desired or beneficial changes in one's role (e.g., establishing a more flexible work environment, adding desired tasks or assignments and/or removing undesirable aspects of one's job) should theoretically reduce strain and burnout, it may also increase feelings of job tension or anxiety or be a reaction to increased stress levels. In this study, a positive relationship between job-change negotiation and job tension and anxiety was observed; however, causality cannot be determined. While we know organizations are constantly changing and becoming more flexible, decentralized, and boundaryless (e.g., Fritz & Sonnentag, 2009), the organization used in this study is a government institution, where such trends have not been observed as of yet. Therefore, the exacerbating effect of negotiation on strain and burnout

may be, in part, an artifact of the sample used, where negotiating job roles and demands is not encouraged. As such, it is likely when negotiation is necessary, it initiates a stressful experience.

Aspinwall and Taylor (1997) proposed that choosing the wrong proactive behavior in a situation can exacerbate negative effects of stress if an ineffective coping mechanism is chosen. It may also be likely that role negotiation is, in fact, an effective coping mechanism dependent upon situational characteristics. This is consistent with Folkman and Moskowitz's (2004) research on coping, as they suggested coping is a complex process with various influences. In the right circumstance, when negotiating with a well-liked or respected supervisor, or for those who enjoy conflict, role negotiation may be more likely to yield positive results. Negotiation is likely to be a coping mechanism sensitive to other variables such as political perceptions, relationship quality, self efficacy and personality of the individuals involved.

Finally, Folkman and Moskowitz (2004) introduced meaning-focused coping as an effective strategy in the stress process. By using meaning-focused coping, individuals cognitively change the meaning of situation to overcome experiences of stress. The proactive behavior most often exhibiting neutralization, and reduction, of job tension and dimensions of burnout is positive framing. Positive framing had neutralizing effects on physical fatigue such that as positive framing increased, the relationship between both role overload and physical fatigue and QTD and physical fatigue was weakened. In addition, direct negative relationships were shown between positive framing on physical fatigue. This suggests positive framing does play an important role in neutralizing negative physical outcomes of stress. This is consistent with research in the medical field. Research in the health and social sciences have found that being optimistic is positively related to increased physical health (e.g., Pettit, Kline, Gencoz, Gencoz, & Joiner, 2001).

Strengths of the Current Study

The current study has several strengths worthy of discussion. These include the inclusion of multiple proactive behaviors in a single study, the proposal of a framework with which to categorize proactive behaviors, and the diversity of the organization's population.

This study is one of the first to incorporate multiple proactive behaviors in a single study. As such, it represents a first step towards integrating our knowledge and enhancing our understanding of proactive behaviors from an integrated perspective. One of the unique strengths of this study is that a framework with which to classify proactive behaviors was proposed, following Wrzesniewski and Dutton's (2001) job crafting theory. While all forms of proactive behaviors do not clearly fall within one of these three categories (task, relationship, cognitive), one initial suggestion has been made that will allow researchers to test three forms of proactive behaviors simultaneously and to determine whether or not all like-forms have similar effects on stress and other organizational outcomes.

The inclusion of multiple proactive behaviors also allows for competing models and hypothesis testing of the effectiveness of proactive behaviors as neutralizers of the stress process. With a multiple inclusion approach, our understanding of this role has been expanded to include interactions of various proactive behaviors across various types of stressor-strain relationships.

An additional strength of the current study is the diversity of the organization from which the sample was taken. Much of what we know in the organizational sciences is based on studies of white collar, educated, or professional employees, which suggests a need for studies that include samples of individuals with high school diplomas, GEDs, or technical and associates degrees to expand our knowledge of organizational phenomena. As such, sample populations

based on employees with diversity across educational background can add to our knowledge of organizational research and increase the generalizability of our findings.

The organization was chosen, in part, because of its diversity across education levels and job types. The organization consisted of a diverse composition of job types such as medical staff, administrative and business office personnel, mechanics, food services employees, and psychologists. As seen in Table 1, the sample characteristics for the educational backgrounds of employees who participated in the study were also diverse. Forty-one percent of the sample had a High School diploma, GED, Technical or Associates degree, as compared to fifty percent of the participants who had a Bachelors, Masters, or Doctoral degree. Therefore, the findings of this study are more generalizable to more diverse populations of individuals than if only professional, white collar employees had participated.

Limitations of the Current Study

Limitations of the study which affect the generalizability of its results include a small sample size, a cross-sectional design, and common method variance.

Sample Size and Power

With a minimum sample size of 150 to 200 needed for structural equation modeling, the greatest limitation of this study is its small sample size to adequately test the number of parameters estimated in each model. This limitation is more severe when considering the sample size needed to detect interactions in moderated SEM is undoubtedly larger. While parceling increased the power available to detect significant relationships, it is possible that there was not sufficient power to detect moderating effects which were significantly different from zero in all models. Therefore, the results may not reflect the true nature and significance of the relationships

hypothesized in this study. The collection of additional data can resolve some of the uncertainties by ensuring a sample size large enough to achieve power to detect significant moderations, if they indeed exist.

Cross-Sectional Analysis

The theory behind the current study included a temporal element examining the integration of proactive behaviors in the stress process, which can occur across time. However, the data collection process was cross-sectional in nature and did not examine the relationships across time. Therefore, through the results of this study it cannot be determined whether or not the coping strategies exhibited were in fact proactive behaviors. Ideally, this study would have assessed one's engagement in proactive behaviors prior to a stress encounter and would have measured stressors, job tension, and burnout across time, after engagement in the initial proactive behavior. As such, the conclusions related to the effectiveness of proactive behaviors as coping strategies in the stress process cannot assume causality or temporal precedence of the proactive behaviors.

Common Method Variance

Due to the single-source, self-report nature of the data collection, there is a possibility for common method variance. To test for the presence of common method variance, I included an unrelated scale (i.e., materialism) in the survey that should demonstrate discriminate validity as long as no method factor exists and included it in the correlation matrix. Spector (2006) suggested that if common method variance existed in a self-report survey, significant correlations should be found among all variables in the study. Self-reported materialism has non-significant correlations with other self-reported variables (i.e., role overload, QTD, worry, negotiation, networking, job tension, and factual autonomy). This suggests common method

variance, if it did exist, was inconsequential and did not significantly influence the results of the current study.

Directions for Future Research

The current study provides a preliminary investigation of the role of proactive behaviors in the stress process and highlights a number of opportunities for future research. First, an alternative model should be explored which examines the role of proactive behaviors as an antecedent to the experience of stressors instead of a moderating role. The notion of proactive coping suggests individuals engage in behaviors prior to potential experiences of stress; therefore, it is likely that an alternative model should be examined to test the role of proactive behaviors as antecedents to stressors (e.g., role overload, quantitative job demands, cognitive anxiety, worry, and interpersonal conflict). Research on proactive behaviors suggests that using proactive strategies to cope with potentially stressful situations are designed to reduce perceptions of stressors, and are therefore likely antecedents to stressors (e.g., Aspinwall & Taylor, 1997). As individuals engage in proactive behaviors, they are less likely to experience stressors, ultimately resulting in reduced experiences of strain and burnout. As such, alternative models examining the matching principle should be tested reflecting the assumption of a temporal precedence of proactive behaviors to the stress process. (See Post Hoc Analyses.)

Second, an alternative task-oriented proactive behavior can be included in a study to more effectively test its role as a coping strategy in the stress process. A behavior less sensitive to situational variables, which may include proactive behaviors such as seeking feedback to determine where changes need to be made in task boundaries, should be examined. Another example of a task-oriented proactive behavior is taking charge, which has been shown to be an

effective coping mechanism in studies of proactive behavior and stress (e.g., Fritz & Sonnentag, 2009). Items used to measure taking charge include “I tried to adopt improved procedures for doing my job” and “I tried to introduce new structures, technologies, or approaches to improve efficiency” (Morrison & Phelps, 1999).

An additional opportunity for future research is to develop measures of role expansion and role contraction, which represent the both aspects of role negotiation within one’s job. Individuals today are provided more opportunities to define their own role expectations as recent approaches to job design encourage autonomy and increased empowerment (e.g., Hackman & Oldham, 1976; Ilgen & Hollenbeck, 1991; Spreitzer, 1996). As such, it is becoming increasingly important that a measure is created to effectively operationalize one’s ability to change the task boundaries of his or her job.

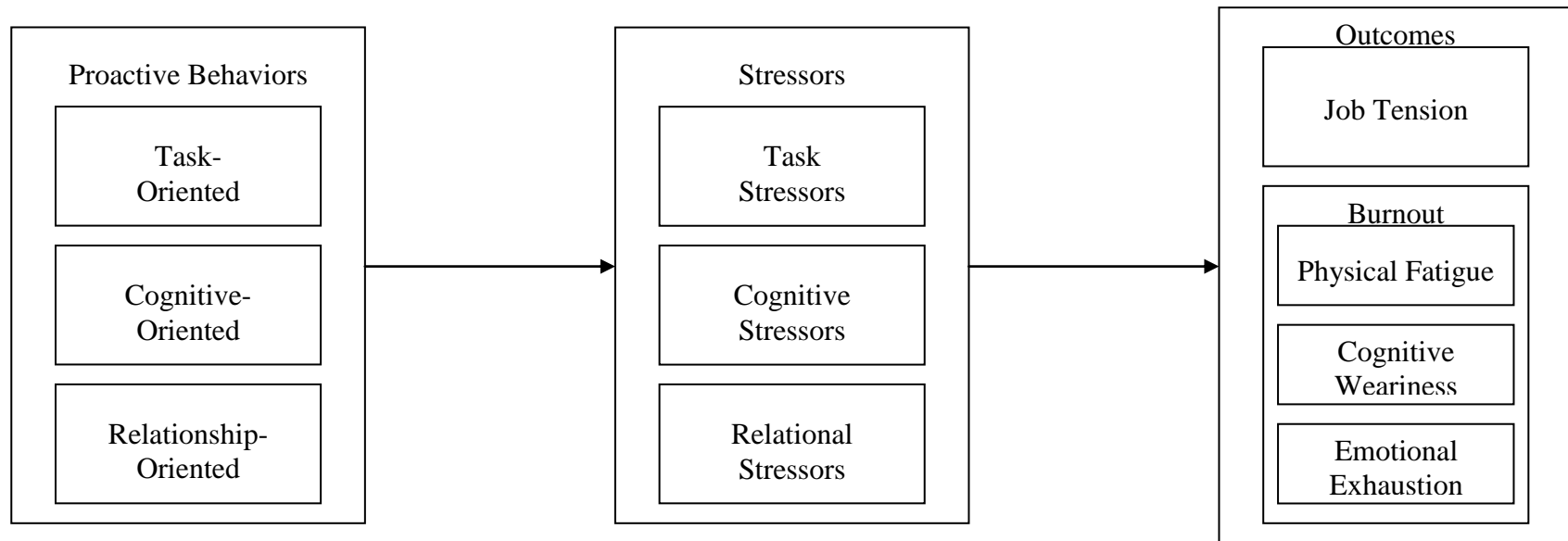
Finally, an additional research stream needed in the proactive behavior literature is to continue to find ways to integrate multiple proactive behaviors into individual studies (Grant & Ashford, 2008). This study provided an initial step towards developing a way to categorize proactive behaviors into a single framework; however, there are forms of proactive behaviors that do not neatly fall into one of the proposed categories based on the job crafting framework. Additional research is needed to develop and test possible frameworks.

Post Hoc Analyses

In post hoc analyses, seven additional models were tested, using SEM, which represent the role of proactive behaviors as antecedents to the stress process for task-oriented, cognitive-oriented and relationship-oriented models. The summary post hoc research model is displayed in Figure 24. Figures of the post hoc models (Models 18 - 24) are included in Appendix G and the fit statistics and parameter estimates are shown in Appendix H (Tables 33 – 36).

Figure 24

Summary Post Hoc Research Model of the Role of Proactive Behaviors in the Stress Process



In summary, positive framing and networking appeared to have a negative relationship with like-category cognitive (cognitive anxiety and worry) and relationship-oriented (interpersonal conflict) stressors, as expected. This suggests that proactive behaviors appear to reduce the experience of workplace stressors, which ultimately results in lower levels of strain and burnout. However, negotiation, the task-oriented proactive behavior does not appear to be related with the task-oriented (quantitative task demands and role overload) stressors. While the relationship is insignificant, job-change negotiation has a positive relationship with stressors and experiences job tension and burnout. This is consistent with the original and competing hypotheses of the study, and may indicate the use of negotiation can initiate experiences of stress. More research should be done to explore the role of proactive behaviors as antecedents to the stress experience.

Conclusion

The current research examined the role of proactive behaviors in the stress process, and the findings suggest the role is quite complex. Two ways of theoretically integrating relevant stressors, proactive behaviors and strain were used: one was based on matching of like-category variables and the other was based on matching bandwidth. Multiple proactive behaviors were examined, allowing competing models to be tested assessing the moderating effects of both matched and non-matched forms of proactive behaviors in the stress process. While matching of like-category stressors and strains to predict the main effects and the percentage of variance explained in the criterion variables was moderately supported, matching does not appear to have predictive validity when determining the effectiveness of coping strategies. As no support was found for the hypothesized relationships, the findings were not consistent with the triple

matching principle. As a result of the findings of this study, it is suggested that a consideration of bandwidth is more important in stress research than is matching.

REFERENCES

REFERENCES

- Ajzen (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Albright, C.L., Winkleby, M.A., Ragland, D.R., Fisher, J., Syme, S.L. (1992). Job strain and prevalence of hypertension in a biracial population of urban bus drivers. *American Journal of Public Health*, 82, 984-989.
- American Institute of Stress. (2009). <http://www.stress.org/job.htm>.
- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.
- Aragon-Correa, J.A. (1998). Strategic proactivity and firm approach to the natural environment. *Academy of Management Journal*, 41, 556-567.
- Ashford, S.J., & Black, J.S. (1996). Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology*, 81, 199-214.
- Ashford, S.J., & Cummings, L.L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance*, 32, 370-398.
- Ashford, S.J., & Cummings, L.L. (1985). Proactive feedback seeking: The instrumental use of the information environment. *Journal of Occupational Psychology*, 58, 67-79.
- Ashford, B.E., & Saks, A.M. (1996). Socialization tactics: Longitudinal effects on newcomer adjustment. *Academy of Management Journal*, 39, 149-178.
- Asparouhov, T., & Muthén, B. (2006). Comparison of estimation methods for complex survey data analysis. Retrieved October 4, 2006, from <http://www.statmodel.com/recpapers.shtml>.

- Aspinwall, L.G., & Taylor, S.E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121, 417-436.
- Axtell, C.M., & Parker, S.K. (2003). Promoting role breadth self-efficacy through involvement, work design, and training. *Human Relations*, 56, 112-131.
- Bakker, A.B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22, 309-328.
- Bakker, A.B., Demerouti, E., & Euwema, M.C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10, 170-180.
- Bakker, A.B., Demerouti, E., & Schaufeli, W.B. (2003). Dual processes at work in a call centre: An application of the job demands-resources model. *European Journal of Work and Organizational Psychology*, 12, 393-417.
- Bakker, A.B., Hakanen, J.J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99, 274-284.
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14, 103-118.
- Bedeian, A.G., & Armenakis, A.A. (1981). A path-analytic study of the consequences of role conflict and ambiguity. *Academy of Management Journal*, 24, 417-424.
- Beehr, T.A., Johnson, L.B., & Nieva, R. (1995). Occupational stress: Coping of police and their spouses. *Journal of Organizational Behavior*, 16, 3-25.

- Beehr, T.A., Walsh, J.T., & Taber, T.D. (1976). Relationships of stress to individually and organizationally valued states: Higher order needs as a moderator. *Journal of Applied Psychology, 61*, 35-40.
- Billings, A.G., & Moos, R.H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine, 4*, 139-157.
- Bliese, P.D., & Halverson, R.R. (1998). Group size and measures of group-level properties: An examination of eta-squared and ICC values. *Journal of Management, 24*, 157-172.
- Bollen, K.A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.
- Bond, F.W. & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 6*, 1057-1067.
- Borkovec, T.D., Ray, W.J., & Stober, J. (1998). Worry: A cognitive phenomenon intimately linked to affective, physiological and interpersonal behavioral processes. *Cognitive Therapy and Research, 8*, 561-576.
- Brosschot, J.F., Gerin, W., Thayer, J.F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research, 60*, 113-124.
- Brouer, R.L., Ferris, G.R., Hochwarter, W.A., Laird, M.D., & Gilmore, D.C. (2006). The strain-related reactions to perceptions of organizational politics as a workplace stressor: political skill as a neutralizer. In E. Vigota-Gadot & A. Drory (Eds.) *Handbook of organizational politics* (pp. 187-206). Northampton, MA: Edward Elgar Publishing, Inc.
- Browne, M.W., & Cudek, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research, 24*, 445-455.

- Burt, R.S. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Cable, D.M., & Parsons, C.K. (2001). Socialization tactics and person-organization fit. *Personnel Psychology*, 54, 1-22.
- Cannon, W.B. (1932). *The Wisdom of the Body*. New York: Norton.
- Cook, J.D., Hepworth, S.J., Wall, T.D., & Warr, P.B. (1981). *The experience of work: A compendium and review of 249 measures and their use*. London, Academic Press.
- Crant, J. M. (1995). The proactive personality scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, 532-537.
- Crant, J.M. (2000). Proactive behavior in organizations. *Journal of Management*, 26, 435-462.
- Cronbach, L.J. (1960). *Essentials of psychological testing* (2nd ed.). New York: Harper & Row.
- Cronbach, L.J., & Gleser, G.C. (1965). *Psychological tests and personnel decisions*. Urbana: University of Illinois Press.
- Cummings, J.N., & Higgins, M.C. (2006). Relational instability at the network core: Support dynamics in developmental networks. *Social Networks*, 28, 38-55.
- Davey, G.C.L. (1994). Pathological worrying as exacerbated problem-solving. In G.C.L. Davey, & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment, and treatment*. New York: Wiley.
- Dawis, R.V., & Lofquist, L.H. (1978). A note on the dynamics of work adjustment. *Journal of Vocational Behavior*, 12, 76-79.
- de Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology*, 91, 1359-1374.

- DeJonge, J., & Kompier, M.A.J. (1997). A critical examination of the demand-control-support model from a work psychological perspective. *International Journal of Stress Management*, 4, 235-258.
- Demerouti, E. Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.
- Demir, D., Ulusoy, M., & Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.
- Dewe, P.J. (1992). Applying the concept of appraisal to work stressors: Some exploratory analysis. *Human Relations*, 45, 143-165.
- Eden, D. (1984). Self-fulfilling prophecy as a management tool: Harnessing Pygmalion. *Academy of Management Review*, 9, 64-73.
- Eden, D. (2003). Self-fulfilling prophecies in organizations. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (2nd ed., pp. 91-122). Mahwah, NJ: Lawrence Erlbaum Associates.
- Eisenberg, N., Fabes, R.A., & Guthrie, I.K. (1997) Coping with stress: The roles of regulation and development. In S.A. Wolchik (Ed.), *Handbook of Children's Coping: Linking Theory and Intervention*. (pp. 41-70). New York: Plenum Endler NS, Parker.
- Fay, D., & Sonnentag, S. (2002). Rethinking the effects of stressors: A longitudinal study on personal initiative. *Journal of Occupational Health Psychology*, 7, 221-234.
- Ferris, G.R., Blass, R., Douglas, C., Kolodinsky, R.W., & Treadway, D.C. (2003). Personal reputation in organizations. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (2nd ed.): 211-246. Mahwah, NJ: Lawrence Erlbaum.

- Ferris, G.R., Treadway, D.C., Kolodinsky, R.W., Hochwarter, W.A., Kacmar, C.J., Douglas, C., & Frink, D.D. (2005). Development and validation of the political skill inventory. *Journal of Management*, 31, 126-152.
- Ferris, G.R., Treadway, D.C., Perrewé, P.L., Brouer, R.L., Douglas, C., & Lux, S. (2007). Political skill in organizations. *Journal of Management*, 33, 290-320.
- Flap, H., & Völker, B. (2001). Goal specific social capital and job satisfaction effects of different types of networks on instrumental and social aspects of work. *Social Networks*, 23, 297-320.
- Folkman, S., & Lazarus, R.S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219-239.
- Folkman, S., & Lazarus, R.S. (1985). If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.
- Folkman, S., Lazarus, R.S., Gruen, R.J., & DeLongis, A. (1986a). Appraisal, coping, health status and psychological symptoms. *Journal of Personality and Social Psychology*, 50, 571-579.
- Folkman, S., Lazarus, R.S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R.J. (1986b). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50, 992-1003.
- Folkman, S., & Moskowitz, J.T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology*, 55, 745-774.

- Fox, M.L., Dwyer, D.J., & Ganster, D.C. (1993). Effects of stressful job demands and control on physiological and attitudinal outcomes in a hospital setting. *Academy of Management Journal*, 36, 289-319.
- Fox, S., Spector, P.E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotion. *Journal of Vocational Behavior*, 59, 291-309.
- Frese, M. (2006). Grand theories and mid-range theories: Cultural effects on theorizing and the attempt to understand active approaches to work. In K.G. Smith & M.A. Hitt (Eds.), *Great minds in management: The process and theory development* (pp. 84-108). Oxford: Oxford University Press.
- Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. In Staw, B.M., & Sutton, R.I. (Eds.) *Research in organizational behavior*. Vol. 23 (pp. 133-187).
- Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational and Organizational Psychology*, 70, 139-161.
- Frese, M., Garst, H., & Fay, D. (2000). *Control and complexity in work and the development of personal initiative: A four-wave longitudinal structural equation model of occupational socialization*. Manuscript submitted for publication.
- Frese, M., Kring, W., Soose, A., & Zempel, J. (1996). Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal*, 39, 37-63.
- Frew, D.R. (1974). Transcendental meditation and productivity. *Academy of Management Journal*, 17, 362 – 368.

- Friedman, R., & Krackhardt, D. (1997). Social capital and career mobility: A structural theory of lower returns to education for Asian employees. *Journal of Applied Behavioral Science* 33, 316-334.
- Fritz, C., & Sonnentag, S. (2006). Recovery, well-being, and performance-related outcomes: The role of workload and vacation experiences. *Journal of Applied Psychology*, 91, 936-945.
- Fritz, C., & Sonnentag, S. (2009). Antecedents of day-level proactive behavior: A look at job stressors and positive affect during the workday. *Journal of Management*, 35, 94-111.
- Frone, M.R. (2000). Interpersonal conflict at work and psychological outcomes: Testing a model among young workers. *Journal of Occupational Health Psychology*, 5, 246-255.
- Frone, M.R., Russell, M., & Cooper, M.L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *Journal of Applied Psychology*, 77, 65-78.
- Ganster, D.C., & Fusilier, M.R. (1989). Control in the workplace. In C.L. Cooper & I. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 235-280). New York: Wiley
- Ganster, D.C., Mayes, B.T., Sime, W.E., & Tharp, G.D. (1982). Managing organizational stress: A field experiment. *Journal of Applied Psychology*, 67, 533-542.
- González-Romá, V., Schaufeli, W.B., Bakker, A.B., & Lloret, S. (2006). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, 68, 165-174.
- Grant, A.M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32, 393-417.

- Grant, A.M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, 93, 108-124.
- Grant, A.M., & Ashford, S.J. (2008). The dynamics of proactivity at work. *Research in Organizational Behavior*, 28, 3-34.
- Greenglass, E.R. (2005) Proactive coping, resources and burnout: Implications for occupational stress. In A.G. Antoniou & C.L. Cooper (Eds.) *Research Companion to Organizational Health Psychology* (pp. 503-515). Cheltenham, UK: Edward Elgar.
- Griffin, A.E.C., Colella, A., & Goparaju, S. (2000). Newcomer and organizational socialization tactics: An interactionist perspective. *Human Resource Management Review*, 10, 453-474.
- Gross, J.J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271-299.
- Gupta, N., & Beehr, T.A. (1979). Job stress and employee behaviors. *Organizational Behavior and Human Performance*, 23, 373-387.
- Hackman, J.R., & Oldham, G.R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250-279.
- Hakanen, J.J., Bakker, A.B., & Demerouti, E. (2005). How dentists cope with their demands and stay engaged: The moderating role of job resources. *European Journal of Oral Sciences*, 113, 479-487.
- Hakanen, J.J., Bakker, A.B., & Schaufeli, W.B. (2006). Burnout and work engagement among teachers. *Journal of Social Psychology*, 43, 495-513.
- Halbesleben, J.R.B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, 91, 1134-1145.

- Halbesleben, J.R.B., & Buckley, M.R. (2004). Burnout in organizational life. *Journal of Management*, 30, 859-879.
- Hardin, J.W., & Hilbe, J.M. (2003). Generalized estimating equations. Boca Raton, FL: Chapman and Hall/CRC.
- Hobfoll, S. E. (1988). *The Ecology of Stress*. New York: Hemisphere.
- Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513-524.
- Hobfoll, S.E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50, 337-421.
- Hobfoll, S.E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307-324.
- Hobfoll, S.E., & Shirom, A. (2000). Conservation of resources theory: Application to stress and management in the workplace. In R.T. Golembiewski (Ed.), *Handbook of Organization Behavior* (pp. 57-81). New York: Dekker.
- Hochberg, Y., & Tamhane, A. C. (1987). *Multiple comparison procedures*. John Wiley & Sons: New York.
- Hochwarter, W.A., Ferris, G.R., Gavin, M.B., Perrewé, P.L., Hall, A.T., & Frink, D.D. (2007). Political skill as neutralizer of felt accountability-job tension effects on job performance ratings: A longitudinal investigation. *Organizational Behavior and Human Decision Processes*. 102, 226-239.
- Hogan, R., Hogan, J., & Roberts, W.B. (1996). Personality measurement and employment decisions. *American Psychologist*, 51, 469-477.

- Hoyle, R.H., (Ed.). (1995). *Structural equation modeling: Concepts, issues, and applications*. Thousand Oaks, CA: Sage Publications.
- Huberty, C. J. & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analyses. *Psychological Bulletin*, 105, 302-308.
- Hurrell, J.J., Nelson, D.L., & Simmons, B.L. (1998). Measuring job stressors and strains: Where we have been, where we are, and where we need to go. *Journal of Occupational Health Psychology*, 3, 368-389.
- Ilgén, D.R., & Hollenbeck, J.R. (1991). The structure of work: Job design and roles. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 2, pp. 165-207). Palo Alto, CA: Consulting Psychologists Press, Inc.
- Jackson, S.E., & Schuler, R.S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36, 16-78.
- Janssen, P.M.P., Schaufeli, W.B., & Houkes, I. (1999). Work-related and individual determinants of the three burnout dimensions. *Work & Stress*, 13, 74-86.
- Jex, S.M. (1998). *Stress and job performance: Theory, research, and implications for managerial practice*. Thousand Oaks, CA: Sage.
- Jones, G.R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal*, 29, 262-279.
- Jones, F., & Fletcher, B. (1996). Job control and health. In M.J. Schabracq, J.A.M. Winnubst, & C.L. Cooper (Eds.), *Handbook of Work and Health Psychology* (pp.33-50). Chichester: Wiley.

- Joudrey, A.D., & Wallace, J.E. (2009). Leisure as a coping resource: A test of the job demand-control, support model. *Human Relations*, 62, 195-217.
- Kahn, R.L., & Byosiore, P. (1992). Stress in organizations. In M.D. Dunnette, & L.M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (Vol. 2, pp. 572-650). Palo Alto, CA: Consulting Psychologists Press, Inc.
- Kahn, R.L., Wolfe, D.M., Quinn, R.P., Snoek, J.D., & Rosenthal, R.A. (1964). *Organizational stress: studies in role conflict and ambiguity*. New York: Wiley.
- Karasek, R.A. (1979). Job demands, job decision-latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24, 285-308.
- Karasek, R. (1990). Lower health risk with increased job control among white collar workers. *Journal of Organizational Behavior*, 11, 171-185.
- Karasek, R., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York: Basic Books, Inc.
- Karasek, R.A., Triantis, K.P., & Chaudhry, S.S. (1982). Coworker and supervisor support as moderators of association between task characteristics and mental strain. *Journal of Occupational Behaviour*, 3, 181-200.
- Katz, D., & Kahn, R.L. 1966. *The social psychology of organizations*. New York: Wiley.
- Katz, D., & Kahn, R. L. 1978. *The social psychology of organizations*. (2nd ed.). New York: Wiley.
- Keenan, A., & Newton, T.J. (1985). Stressful events, stressors and psychological strains in young professional engineers. *Journal of Occupational Behavior*, 6, 151-156.
- Kim, T., Cable, D.M., & Kim S. (2005). Socialization tactics, employee proactivity, and person-organization fit. *Journal of Applied Psychology*, 90, 232-241.

- Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika*, 65, 457-474.
- Klein, A.G., & Stoolmiller, M. (2003). Detecting latent interaction effects in behavioral data. *Methods of Psychological Research Online*, 8, 113-126.
- Koehler, D.J. (1991). Explanation, imagination, and confidence in judgment. *Psychological Bulletin*, 110, 499-519.
- Kristensen, T.S. (2002) A new tool for assessing psychosocial factors at work: The Copenhagen Psychosocial Questionnaire. *TUTB* [Newsletter of the European Trade Union Technical Bureau for Safety and Health], 19-20 (September), 45-47.
- Kristensen, T.S., Bjorner, J.B., Christensen, K.B., & Borg, V. (2004). The distinction between work pace and working hours in the measurement of quantitative demands at work. *Work & Stress*, 8, 305-322.
- Landis, R.S., Beal, D.J., and Tesluk, P.E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods*, 3, 186-207.
- Lazarus, R.S. (1991). Progress on a cognitive-motivational-relational theory of emotions. *American Psychologist*, 46, 819-834.
- Lazarus, R.S. (1993). From psychological stress to the emotions: A history of changing outlooks. *Annual Review of Psychology*, 44, 1-21.
- Lazarus, R.S. (1994). Psychological stress in the workplace. In R. Crandall and P.L. Perrewé (Eds.). *Occupational Stress: A Handbook*. (pp. 3-14). New York: Taylor and Francis.

- Lazarus, R.S. (2001). Relational meaning and discrete emotions. In K.R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal Processes in Emotion: Theory, methods, research. (Series in affective science)*. (pp. 37-67). New York: Oxford University Press.
- Lazarus, R.S., & DeLongis, A. (1983). Psychological stress and coping in aging. *American Psychologist*, 38, 245-254.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Leiter, M.P., & Maslach, C. (1988). The impact of impersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior*, 9, 297-308.
- Lehrer, P.M., & Woolfolk, R.L. (1982). Self-report assessment of anxiety: Somatic, cognitive, and behavioral modalities. *Behavioral Assessment*, 4, 167-177.
- LePine, J.A., Podsakoff, N.P., & LePine, M.A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, 48, 764-775.
- Lin, N. (1999). Building a network theory of social capital. *Connections*, 22, 28-51.
- Little, B.R. (1983). Personal projects: A rationale and method for investigation. *Environment and Behavior*, 15, 273-309.
- Loehlin, J. C. (1992). *Latent variable models: An introduction to factor, path, and structural analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Longford, N.T., & Muthén, B.O. (1992). Factor analysis for clustered observations. *Psychometrika*, 57, 581-597.
- Louis, M.R., Posner, B.Z., & Powell, G.N. (1983). The availability and helpfulness of socialization practices. *Personnel Psychology*, 35, 857-866.

- Major, D.A., Kozlowski, S.W.J., Chao, G.T., & Gardner, P.D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. *Journal of Applied Psychology*, 80, 418-431.
- March, J.G., & Simon, H.A. (1958). *Organizations*. New York: John Wiley.
- Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice Hall.
- Maslach, C., & Jackson, S.E. (1984). Burnout in organizational settings. In S. Oskamp (Ed.) *Applied Social Psychology Annual: Applications in Organizational Settings* (Vol. 5; pp. 133-154). Beverly Hills, CA: Sage Publications.
- Maslach, C., & Schaufeli, W.B. (1993). Historical and conceptual development of burnout. In W.B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp.1-16). Washington, DC: Taylor & Francis.
- Melamed, S., Shirom, A., Toker, S., Berlinger, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, 132, 327-353.
- Meyer, T.J., Miller, M.L., Metzger, R.L., Borkovec, T.D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28, 487-495.
- Moos, R.H., & Billings, A.G. (1982). Conceptualizing and measuring coping resources and processes. In L. Goldberger, & S. Breznitz (Eds.), *Handbook of stress: Theoretical and Clinical Aspects*. New York: Free Press.
- Morris, L., Davis, D., & Hutchings, C. (1981). Cognitive and emotional components of anxiety: Literature review and revised worry-emotionality scale. *Journal of Educational Psychology*, 75, 541-555.

- Morrison, E.W. (2002). Newcomers' relationships: The role of social network ties during socialization. *Academy of Management Journal*, 45, 1149-1160.
- Morrison, E.W. (2006). Doing the job well: An investigation of pro-social rule breaking. *Journal of Management*, 32, 5-28.
- Morrison, E.W., & Phelps, C. (1999). Taking charge: Extra-role efforts to initiate workplace change. *Academy of Management Journal*, 42, 403-419.
- Motowidlo, S.J., Packard, J.S., Manning, M.R. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology*, 71, 618-629.
- Muthén, B.O., & Muthén, L. (2010). *Mplus (Version 6.0) [Computer Software]*. Los Angeles: Muthén & Muthén.
- Nelson, D.L., & Quick, J.C. (1991). Social support and newcomer adjustment in organizations: Attachment theory at work? *Journal of Organizational Behavior*, 12, 543-554.
- Nicholson, N. (1984). A theory of work role transitions. *Administrative Science Quarterly*, 29, 172-191.
- Nurmi, J.E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review*, 11, 1-59.
- Ohly, S., Sonnentag, S., & Pluntke, F. (2006). Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior*, 27, 257-279.
- Ones, D.S., & Viswesvaran, C. (1996). Bandwidth-fidelity dilemma in personality measurement for personnel selection. *Journal of Organizational Behavior*, 17, 609-626.

- Parker, S.K., & Sprigg, C.A. (1999). Minimizing strain and maximizing learning: The role of job demands, job control, and proactive personality. *Journal of Applied Psychology*, 84, 925-939.
- Parker, S.K., Wall, T.D., & Jackson, P.R. (1997). 'That's not my job': Developing flexible employee work orientations. *Academy of Management Journal*, 40, 899-929.
- Parker, S.K., Williams, H.M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91, 636-652.
- Pearlin, L.I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 19, 2-21.
- Pettit, J.W., Kline, J.P., Gencoz, T., Gencoz, F., & Joiner, T.E. (2001). Are happy people healthier? The specific role of positive affect in predicting self-reported health symptoms. *Journal of Research in Personality*, 35, 521-536.
- Perrewé, P.L., Zellars, K.L., Ferris, G.R., Rossi, A.M., Kacmar, C.J., & Ralston, D.A. (2004). Neutralizing job stressors: Political skill as an antidote to the dysfunctional consequences of role conflict stressors. *Academy of Management Journal*, 47, 141-152.
- Perrewé, P.L., Zellars, K.L., Rossi, A.M., Ferris, G.R., Kacmar, C.J., Liu, Y., Zinko, R., & Hochwarter, W.A. (2005). Political skill: An antidote in the role overload – strain relationship. *Journal of Occupational Health Psychology*, 10, 239-250.
- Pfeffer, J. (1992). *Managing with power: Politics and influence in organizations*. Boston: Harvard Business School Press.
- Podsakoff, N.P., LePine, J.A., & LePine, M.A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology*, 92, 438-454.

- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology* 24, 1-24.
- Reichers, A.E. (1987). An interactionist perspective on newcomer socialization rates. *Academy of Management Review*, 12, 278-287.
- Richins, M.L., (1987). Media, materialism, and human happiness. In M.Wallendorf & P. Anderson (Eds.), *Advances in Consumer Research* (Vol. 14, pp. 352-356). Provo, UT: Association for Consumer Research.
- Rizzo, J.R., House, R.J., & Lirtzman, S.I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15, 150-163.
- Saks, A.M., & Ashforth, B. (1996). Proactive socialization and behavioral self-management. *Journal of Vocational Behavior*, 48, 301-323.
- Schnall, P., Pieper, C., Schwartz, J., Karasek, R., Schlusell, Y., Devereux, R., Ganau, A., Alderman, M., Warren, K., & Pickering, T. (1990). The relationship between “job strain,” workplace diastolic blood pressure, and left ventricular heart mass. Results of a case-control study. *JAMA*, 263, 1929-1935.
- Schaubroeck, J., Cotton, J., & Jennings, K. (1989). Antecedents and consequences of role stress: A covariance structure analysis. *Journal of Organizational Behavior*, 10, 35-58.
- Schaubroeck, J., & Merritt, D.E. (1997). Divergent effects of job control on coping with work stressors: The key role of self-efficacy. *Academy of Management Journal*, 40, 738-754.
- Schaufeli, W.B., & Bakker, A.B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, 293-315.

- Schneider, R.J., & Hough, L.M. (1995). Personality in industrial/organizational psychology. In C.L. Cooper & I.T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (pp.75-129). Chichester, England: Wiley.
- Schneider, R.J., Hough, L.M., & Dunnette, M.D. (1996). Broad-sided by broad traits: How to sink science in five dimensions or less. *Journal of Organizational Behavior*, 17, 639-655.
- Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Searle, B.J. (2008). Does personal initiative training work as a stress management intervention? *Journal of Occupational Health Psychology*, 13, 259-270.
- Seashore, S.E., Lawler, E.E., Mirvis, P., & Cammann, C. (1982). *Observing and measuring organizational change: A guide to field practice*. New York: Wiley.
- Segerstrom, S.C., Tsao, J.C.I., Alden, L.E., & Craske, M.G. (2000). Worry and rumination: Repetitive thought as a concomitant and predictor of negative mood. *Cognitive Therapy and Research*, 24, 671-688.
- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, 54, 845-874.
- Seigrist, J. (1996). Adverse health effects of high effort-low reward conditions. *Journal of Occupational Health Psychology*, 1, 27-41.
- Selye, H. (1936, July 4). A syndrome produced by diverse noxious agents. *Nature*, 32.
- Selye, H. (1973). The evolution of the stress concept. *American Scientist*, 61, 692-699.

- Settoon, R.P., & Adkins, C.L. (1997). Newcomer socialization: The role of supervisors, coworkers, friends and family members. *Journal of Business and Psychology*, 11, 507-516.
- Shirom, A., & Melamed, S. (2006). A comparison of the construct validity of two burnout measures in two groups of professionals. *International Journal of Stress Management*, 13, 176-200.
- Shrout, P.E., & Fleiss, J.L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86, 420-428.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior. A new look at the interface between nonwork and work. *Journal of Applied Psychology*, 88, 518-528.
- Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods*, 9, 221–232.
- Spector, P.E., Dwyer, D.J., & Jex, S.M. (1988). Relations of job stressors to affective, health, and performance outcomes: A comparison of multiple data sources. *Journal of Applied Psychology*, 73, 11-19.
- Spector, P.E., & Fox, S. (2003). Reducing subjectivity in the assessment of the job environment: Development of the factual autonomy scale (FAS). *Journal of Organizational Behavior*, 24, 417-432.
- Spector, P.E., & Jex, S.M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, 3, 356-367.

- Spreitzer, G.M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal*, 39, 483-504.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge: Cambridge University Press.
- Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, 33, 1-39.
- Taylor, S.E., & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Thomas, J.L., Bliese, P.D., & Jex, S.M. (2005). Interpersonal conflict and organizational commitment: Examining two levels of supervisory support as multilevel moderators. *Journal of Applied Social Psychology*, 11, 2375-2398.
- Thompson, J.D. (1967). *Organizations in Action*. New York: McGraw-Hill.
- Turner, N., Parker, S.K., & Williams, H.M. (2002). *Self-managing teams and workplace safety: An employee-level investigation*. Paper presented at the 62nd Annual Meeting of the Academy of Management, Denver, CO.
- Van Der Doef, M., & Maes, S. (1999). The job demand-control(-support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, 13, 87-114.
- Van Dierendonck, D., Schaufeli, W.B., & Bunnk, B.P. (2001). Burnout and inequity among human service professionals: A longitudinal study. *Journal of Occupational Health Psychology*, 6, 43-52.

- Van Dyne, L., Cummings, L.L., & McLean Parks, J. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity In Cummings, L.L., & Staw, B.M. Eds. *Research in Organizational Behavior*. Vol 17 (pp.215-285). Greenwich, CT: JAI Press.
- Viswesvaran, C., Sanchez, J.I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54, 314-334.
- Wall, T.D., Jackson, P.R., Mullarkey, S., & Parker, S.K. (1996). The demands-control model of job strain: A more specific test. *Journal of Occupational and Organizational Psychology*, 69, 153-166.
- Wallis, C., Thompson, D., & Mehrtens, R. (1983, June 6). Stress: Can we cope?, *Time*, 121, 48-54.
- Wanberg, C.R., & Kammeyer-Mueller, J.D. (2000). Predictors and outcomes of proactivity in the socialization process. *Journal of Applied Psychology*, 85, 373-385.
- Watson, D., & Clark, L.A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465-490.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Weick, K.E., & Roberts, K. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38, 357-381.
- Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56, 407-415.

- Wright, T.A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, 83, 486-493.
- Wrzesniewski, A., & Dutton, J.E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26, 179-201.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E., & Schaufeli, W.B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14, 121-141.
- Zellars, K.L., & Perrewé, P.L. (2001). Affective personality and the content of emotional social support: Coping in organizations. *Journal of Applied Psychology*, 86, 459-467.
- Zellars, K.L., Perrewé, P.L., & Hochwarter, W.A. (1999). Mitigating burnout among high-NA employees in health care: What can organizations do? *Journal of Applied Social Psychology*, 29, 2250-2271.
- Zellars, K.L., Perrewé, P.L., Hochwarter, W.A., & Anderson, K.S. (2006). The interactive effects of positive affect and conscientiousness on strain. *Journal of Occupational Health Psychology*, 11, 281-289.
- Zinko, R., Ferris, G.R., Blass, F.R., Laird, M.D. (2007). Toward a theory of reputation in organizations. *Research in personnel and human resources management*, 26, 163-204.

APPENDIX A

APPENDIX A

SUMMARY OF HYPOTHESIZED RELATIONSHIPS

- Hypothesis 1: Role overload is positively related to (a) job tension and (b) physical fatigue.*
- Hypothesis 2: Quantitative task demands are positively related to (a) job tension and (b) physical fatigue.*
- Hypothesis 3: The largest percentage of variance in job tension will be explained by (a) role overload and (b) quantitative task demands.*
- Hypothesis 4: The largest percentage of variance in physical fatigue will be explained by (a) role overload and (b) quantitative task demands.*
- Hypothesis 5: Cognitive anxiety is positively related to cognitive weariness.*
- Hypothesis 6: Worry is positively related to cognitive weariness.*
- Hypothesis 7: The largest percentage of variance in cognitive weariness will be explained by (a) cognitive anxiety and (b) worry.*
- Hypothesis 8: Interpersonal conflict at work is positively related to emotional exhaustion.*
- Hypothesis 9: The largest percentage of variance in emotional exhaustion will be explained by interpersonal conflict.*
- Hypothesis 10: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be neutralized.*
- Hypothesis 11: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and job tension is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and job tension will be most effectively neutralized.*
- Hypothesis 12: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be neutralized.*

- Hypothesis 13: The relationship between task stressors (i.e., (a) role overload and (b) quantitative task demands) and physical fatigue is moderated most strongly by role negotiation such that as role boundaries are negotiated, the relationship between task stressors and physical fatigue will be most effectively neutralized.*
- Hypothesis 14: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be neutralized.*
- Hypothesis 15: The relationship between cognitive stressors (i.e., (a) cognitive anxiety and (b) worry) and cognitive weariness is moderated by positive framing such that as the use of positive framing increases, the relationship between cognitive stressors and cognitive weariness will be most effectively neutralized.*
- Hypothesis 16: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be neutralized.*
- Hypothesis 17: The relationship between relational stressors (i.e., interpersonal conflict) and emotional exhaustion is moderated most strongly by relationship-seeking proactive behaviors (i.e., networking) such that as the use of relationship-seeking behaviors increases, the relationship between relational stressors and emotional exhaustion will be most effectively neutralized.*

APPENDIX B

APPENDIX B

SELF-REPORT MEASURES

Role Overload (Seashore et al., 1982)

1. I never seem to have enough time to get everything done.
2. I have too much work to do to do everything well.
3. The amount of work I am asked to do is fair. (R)

Quantitative Job Demands (Kristensen, 2002; Kristensen et al., 2004)

1. Do you have to work very fast?
2. Is your workload unevenly distributed so it piles up?
3. How often do you not have time to complete all your work tasks?
4. Do you get behind on your work?
5. How often can you take it easy and still do your work?
6. Do you have enough time for your work tasks?
7. Do you have too little to at work?

Cognitive Anxiety (Lehrer & Woolfolk, 1982)

1. I can't get some thought out of my mind.
2. I can't get some picture or images out of my mind.
3. I picture some misfortune.
4. I think about possible misfortunes to my loved ones.
5. I have an uneasy feeling.
6. I am concerned that others might not think well of me.
7. I keep busy to avoid uncomfortable thoughts.
8. I dwell on mistakes that I made.
9. I have to be careful not to let my real feelings show.
10. I imagine myself appearing foolish with a person whose opinion is important.
11. I cannot concentrate at a task or job without irrelevant thoughts intruding.

Penn State Worry Questionnaire (Meyer et al., 1990)

1. If I do not have enough time to do everything, I do not worry about it. (R)
2. My worries overwhelm me.
3. I do not tend to worry about things. (R)
4. Many situations make me worry.
5. I know I should not worry about things, but I just cannot help it.
6. When I am under pressure I worry a lot.
7. I am always worrying about something.
8. I find it easy to dismiss worrisome thoughts. (R)
9. As soon as I finish one task, I start to worry about everything else I have to do.
10. I never worry about anything. (R)
11. When there is nothing more I can do about a concern, I do not worry about it anymore. (R)
12. I have been a worrier all my life.
13. I notice that I have been worrying about things.
14. Once I start worrying, I cannot stop.
15. I worry all the time.
16. I worry about projects until they are done.

Interpersonal Conflict at Work (Frone, 2000)

1. How often do you get into arguments with your supervisor at work?
2. How often does your supervisor yell at you at work?
3. How often is your supervisor rude to you at work?
4. How often does your supervisor do nasty things to you at work?
5. How often do coworkers yell at you at work?
6. How often are coworkers rude to you at work?
7. How often do coworkers do nasty things to you at work?
8. How often do you get into arguments with coworkers at work?

Job Change-Negotiating (adapted from Ashford & Black, 1996)

1. Negotiated with your supervisor about desirable job changes?
2. Negotiated with your supervisor about your task assignments?
3. Negotiated with your supervisor about the demands placed on you?
4. Negotiated with your supervisor about his/her expectations of you?
5. Negotiated with coworkers about desirable job changes?
6. Negotiated with coworkers about your task assignments?
7. Negotiated with coworkers about the demands placed on you?
8. Negotiated with coworkers about their expectations of you?

Positive Framing (Ashford & Black, 1996)

1. Tried to see your situation as an opportunity rather than a threat?
2. Tried to look on the bright side of things?
3. Tried to see your situation as a challenge rather than a problem?

Networking Ability (Ferris et al., 2005)

1. I spend a lot of time and effort at work networking with others.
2. At work, I know a lot of important people and am well connected.
3. I am good at using my connections and network to make things happen at work.
4. I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done.
5. I spend a lot of time at work developing connections with others.
6. I am good at building relationships with influential people at work.

Job Tension (Cook et al., 1981)

1. My job tends to directly affect my health.
2. I work under a great deal of tension.
3. I have felt fidgety or nervous as a result of my job.
4. If I had a different job, my health would probably improve.
5. Problems associated with my job have kept me awake at night.
6. I have felt nervous before attending meetings in the company.
7. I often “take my job home with me” in the sense that I think about it when doing other things.

Physical Fatigue (Melamed et al., 2006)

1. I feel tired.
2. I have no energy for going to work in the morning.
3. I feel physically drained.
4. I feel fed up.
5. I feel like my “batteries” are “dead”.
6. I feel burned out.

Cognitive Weariness (Melamed et al., 2006)

1. My thinking process is slow.
2. I have difficulty concentrating.
3. I feel I’m not thinking clearly.
4. I feel I’m not focused in my thinking.
5. I have difficulty thinking about complex things.

Emotional Exhaustion (Melamed et al., 2006)

1. I feel I am unable to be sensitive to the needs of coworkers and customers.
2. I feel I am not capable of investing emotionally in coworkers and customers.
3. I feel I am not capable of being sympathetic to coworkers and customers.

Positive Affect Negative Affect Scale (Watson et al., 1988)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely
	_____ interested		_____ irritable	
	_____ distressed		_____ alert	
	_____ excited		_____ ashamed	
	_____ upset		_____ inspired	
	_____ strong		_____ nervous	
	_____ guilty		_____ determined	
	_____ scared		_____ attentive	
	_____ hostile		_____ jittery	
	_____ enthusiastic		_____ active	
	_____ proud		_____ afraid	

Factual Autonomy (Spector & Fox, 2003)

In your present job, how often do you have to ask permission...

1. to take a rest break?
2. to take a lunch/meal break?
3. to leave early for the day?
4. to change the hours you work?
5. to leave your office or workstation?
6. to come late to work?
7. to take time off?

How often do the following events occur in your present job?

8. How often does someone tell you what you are to do?
9. How often does someone tell you when you are to do your work?
10. How often does someone tell you how you are to do your work?

Materialism (Richins, 1987)

1. It is important to me to have really nice things.
2. I would like to be rich enough to buy anything I want.
3. I'd be happier if I could afford to buy more things.
4. It sometimes bothers me quite a bit that I can't afford to buy all the things I want.
5. People place too much emphasis on material things. (R)
6. It's really true that money can buy happiness.

Demographics

1. What is your gender? Male/Female
2. What is your age?
3. Which of the following best describes your race or ethnic group?
 - a. White/Caucasian
 - b. Black/African-American
 - c. Latino/Latina/Hispanic
 - d. Native American
 - e. Asian/Native Hawaiian
 - f. Multi-racial (more than one race)
 - g. Other (please indicate)
4. What is the highest educational level you have completed?
 - a. High School/GED
 - b. Associates Degree
 - c. Technical Degree
 - d. Bachelors Degree
 - e. Masters Degree
 - f. Doctoral Degree
5. How long have you been in your present position at work? – Years? Months?
6. How long have you worked for your present employer? – Years? Months?
7. I am currently (check all that apply):
 - a. Contract Employee
 - b. Manager (I make important company decisions)
 - c. Supervisor (I supervise employees)
 - d. Employee (I do not supervise employees)
8. How many persons report to you?

Unique Identifying Information

1. Name
2. Job Title
3. Department
4. Work Email Address (if applicable)
5. Supervisor's Name
6. Supervisor's Department
7. Supervisor's Email Address (if applicable)

APPENDIX C

APPENDIX C

SUMMARY OF HYPOTHESIZED AND COMPETING MODELS

Table 15

Summary of Hypothesized and Competing Models

<i>Hypothesized Models</i>		Hypotheses	Figure	Table
1	Task-Oriented Model	H1,2,10,12	5	4
2	Task-Oriented Model with Role Overload (RO)	H1, 10a, 12a	6	5
3	Task-Oriented Model with Quantitative Task Demands (QTD)	H2, 10b, 12b	7	6
4	Cognitive-Oriented Model	H5, 6, 14	8	7
5	Cognitive-Oriented Model with Cognitive Anxiety (CA)	H5, 14a	9	8
6	Cognitive-Oriented Model with Worry	H6, 14b	10	9
7	Relationship-Oriented Model	H8, 16	11	10
<i>Competing Models</i>		Path	Figure	Table
8	Task-Oriented Model (RO) with Positive Framing	A4-A6	14	23
9	Task-Oriented Model (QTD) with Positive Framing	A7-A9	15	24
10	Task-Oriented Model (RO) with Networking	A10-A11	16	25
11	Task-Oriented Model (QTD) with Networking	A12-A13	17	26
12	Cognitive-Oriented Model (CA) with Negotiating	B6	18	27
13	Cognitive-Oriented Model (Worry) with Negotiating	B7	19	28
14	Cognitive-Oriented Model (CA) with Networking	B8	20	29
15	Cognitive-Oriented Model (Worry) with Networking	B9	21	30
16	Relationship-Oriented Model with Negotiating	C4	22	31
17	Relationship-Oriented Model with Positive Framing	C5-C6	23	32

APPENDIX D

APPENDIX D

SUMMARY OF FIT STATISTICS

Table 16

Confirmatory Factor Analysis Measurement Model Fit Statistics

Task Model		Cognitive Model		Relationship Model	
χ^2	394.790	χ^2	278.35	χ^2	190.171
df	209	Df	155	df	94
<i>p</i> -value	0.000	<i>p</i> -value	0.000	<i>p</i> -value	0.000
CFI	0.923	CFI	0.951	CFI	0.929
TLI	0.906	TLI	0.940	TLI	0.909
RMSEA	0.70	RMSEA	0.066	RMSEA	0.075

Table 17

Hypothesized Task-Oriented Models Fit Statistics

Hypothesized Task-Oriented Models											
Model 1				Model 2				Model 3			
	Main Effect	Interaction	Difference		Main Effect	Interaction	Difference		Main Effect	Interaction	Difference
χ^2	557.539			χ^2	370.929			χ^2	410.252		
df	220			df	145			df	163		
<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000		
CFI	0.859			CFI	0.894			CFI	0.887		
TLI	0.838			TLI	0.875			TLI	0.868		
AIC	9980.817	9988.437	-7.62	AIC	8143.598	8147.726	-4.128	AIC	7994.052	7998.321	-4.269
BIC	10233.498	10253.912	-20.414	BIC	8348.302	8358.826	-10.524	BIC	8208.351	8219.018	-10.667
RMSEA	0.092			RMSEA	0.093			RMSEA	0.092		

Table 18

Hypothesized Cognitive-Oriented Models Fit Statistics

Hypothesized Cognitive-Oriented Models											
Model 4				Model 5				Model 6			
	Main Effect	Interaction	Difference		Main Effect	Interaction	Difference		Main Effect	Interaction	Difference
χ^2	362.382			χ^2	224.298			χ^2	243.567		
df	182			df	114			df	130		
<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000		
CFI	0.935			CFI	0.947			CFI	0.950		
TLI	0.925			TLI	0.937			TLI	0.941		
AIC	7836.103	7839.667	-3.564	AIC	6696.499	6697.321	-0.822	AIC	6546.657	6548.649	-1.992
BIC	8059.998	8069.959	-9.961	BIC	6875.615	6879.636	-4.021	BIC	6735.369	6740.558	-5.189
RMSEA	0.074			RMSEA	0.073			RMSEA	0.069		

Table 19

Hypothesized Relationship-Oriented Model Fit Statistics

Hypothesized Relationship-Oriented Model			
Model 7			
	Main Effect	Interaction	Difference
χ^2	225.943		
df	99		
<i>p</i> -value	0.000		
CFI	0.906		
TLI	0.886		
AIC	5680.153	5682.048	-1.895
BIC	5849.380	5854.468	-5.088
RMSEA	0.084		

Table 20

Competing Task-Oriented Models Fit Statistics

Competing Task-Oriented Models													
Model 8				Model 9				Model 10				Mc	
	Main Effect	Interaction	Difference		Main Effect	Interaction	Difference		Main Effect	Interaction	Difference	Main Effect	
χ^2	237.301			χ^2	270.965			χ^2	243.434			χ^2	261.371
df	128			df	145			df	128			df	145
<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000
CFI	0.937			CFI	0.930			CFI	0.936			CFI	0.937
TLI	0.925			TLI	0.917			TLI	0.924			TLI	0.925
AIC	8174.118	8176.687	-2.569	AIC	8023.782	8024.053	-0.271	AIC	8377.986	8379.583	-1.597	AIC	8228.316
BIC	8369.227	8378.192	-8.965	BIC	8228.486	8235.154	-6.668	BIC	8573.094	8581.088	-7.994	BIC	8433.020
RMSEA	0.069			RMSEA	0.069			RMSEA	0.071			RMSEA	0.067

Table 21

Competing Cognitive-Oriented Models Fit Statistics

Competing Cognitive-Oriented Models													
Model 12				Model 13				Model 14				Model 15	
	Main Effect	Interaction	Difference		Main Effect	Interaction	Difference		Main Effect	Interaction	Difference	Main Effect	
χ^2	320.637			χ^2	364.082			χ^2	200.649			χ^2	230.226
df	130			df	147			df	114			df	130
<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000			<i>p</i> -value	0.000
CFI	0.922			CFI	0.918			CFI	0.959			CFI	0.957
TLI	0.908			TLI	0.905			TLI	0.951			TLI	0.949
AIC	6665.236	6670.014	-4.778	AIC	6513.660	6517.505	-3.845	AIC	6897.465	6896.226	1.239	AIC	6745.143
BIC	6853.620	6861.592	-7.972	BIC	6711.623	6718.662	-7.039	BIC	7076.271	7078.224	-1.953	BIC	6933.527
RMSEA	0.090			RMSEA	0.091			RMSEA	0.065			RMSEA	0.065

Table 22

Competing Relationship-Oriented Models Fit Statistics

Competing Relationship-Oriented Models							
Model 16				Model 17			
	Main Effect	Interaction	Difference		Main Effect	Interaction	Difference
χ^2	352.782			χ^2	237.604		
df	114			df	99		
<i>p</i> -value	0.000			<i>p</i> -value	0.000		
CFI	0.857			CFI	0.894		
TLI	0.830			TLI	0.872		
AIC	5448.259	5452.973	-4.714	AIC	5473.026	5474.535	-1.509
BIC	5627.065	5634.972	-7.907	BIC	5642.547	5647.253	-4.706
RMSEA	0.108			RMSEA	0.088		

APPENDIX E

APPENDIX E

COMPETING PATH MODELS

Figure 14

Model 8 – Task-Oriented Model (RO) with Positive Framing

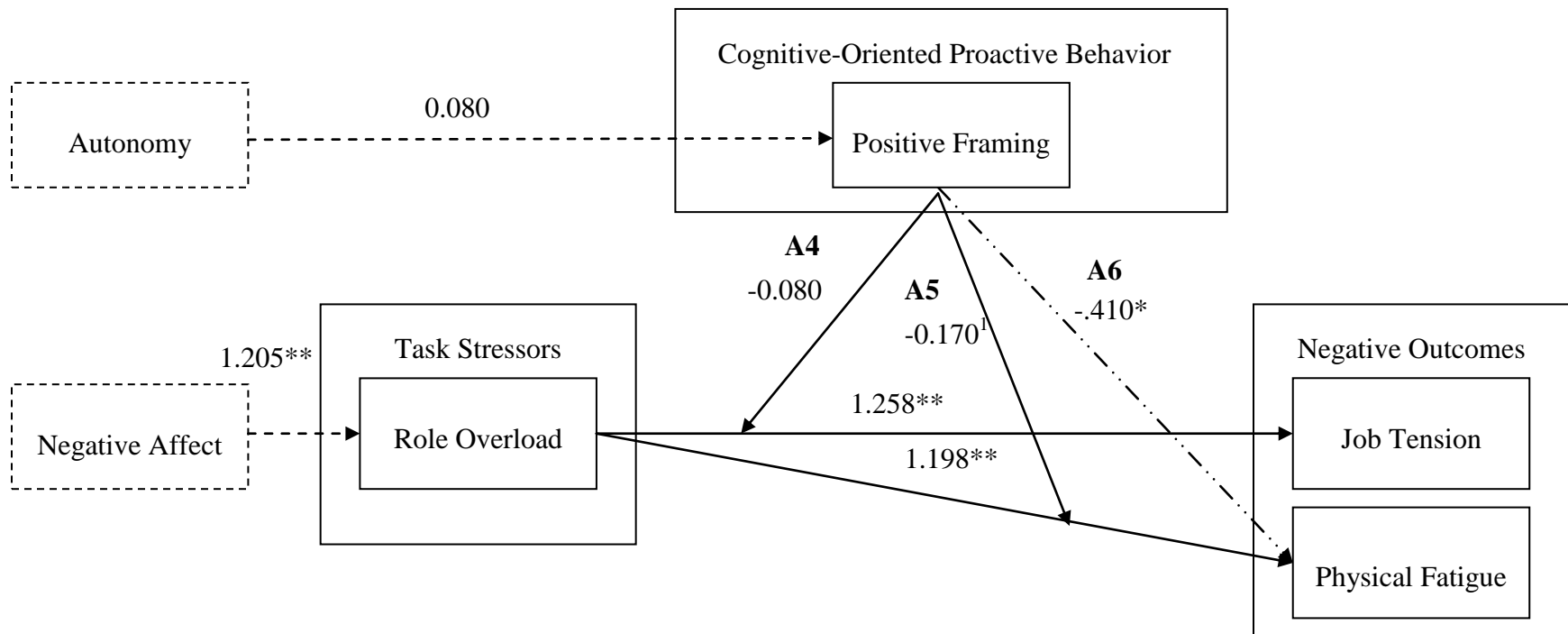


Figure 15

Model 9 – Task-Oriented Model (QTD) with Positive Framing

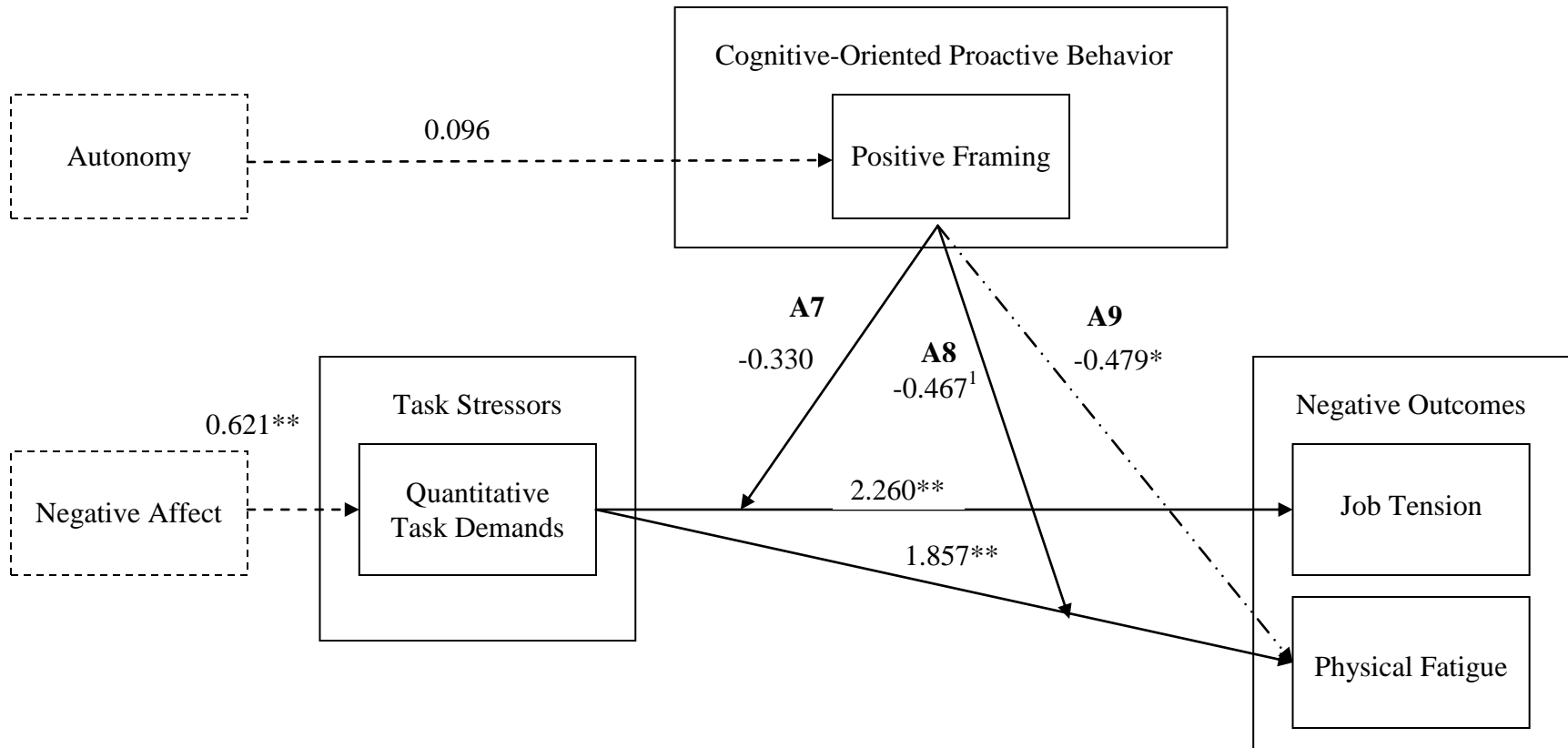


Figure 16

Model 10 – Task-Oriented Model (RO) with Networking

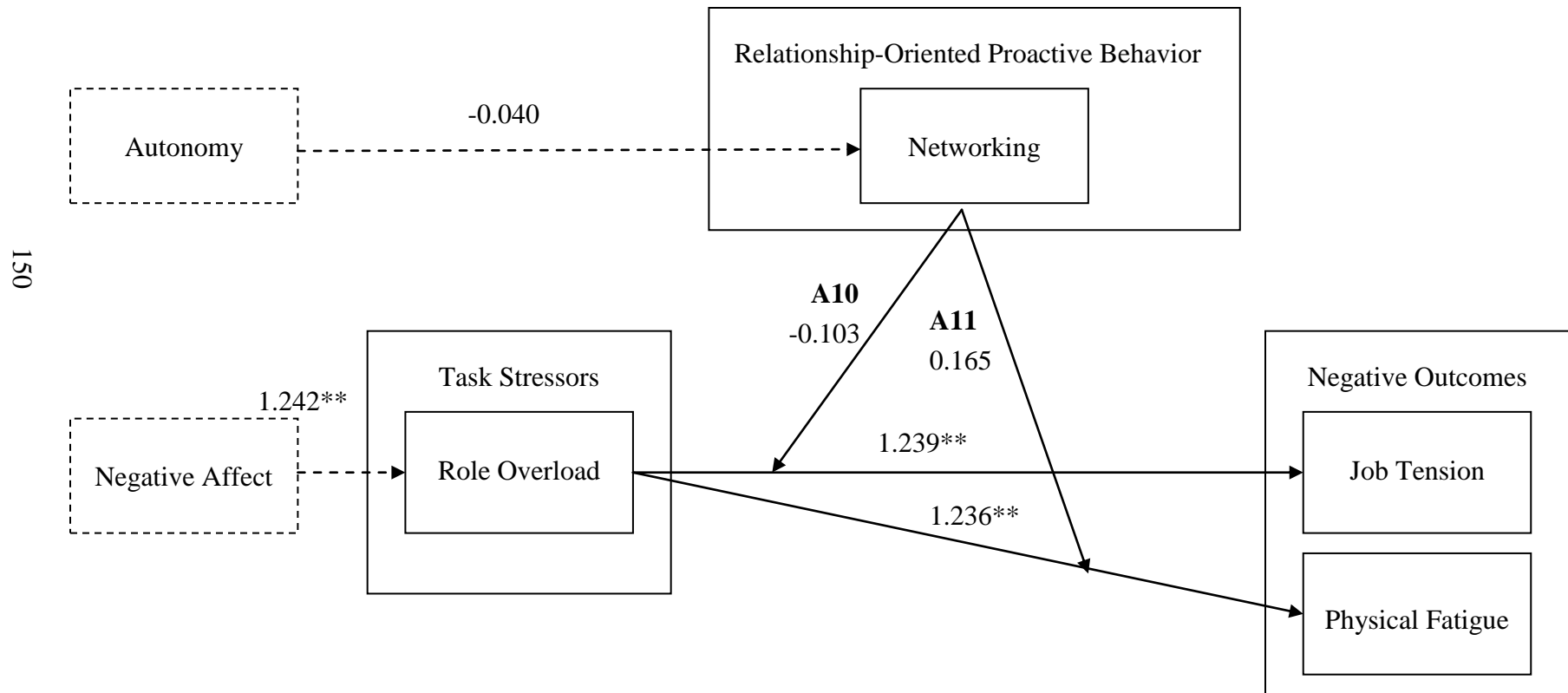


Figure 17

Model 11 – Task-Oriented (QTD) with Networking

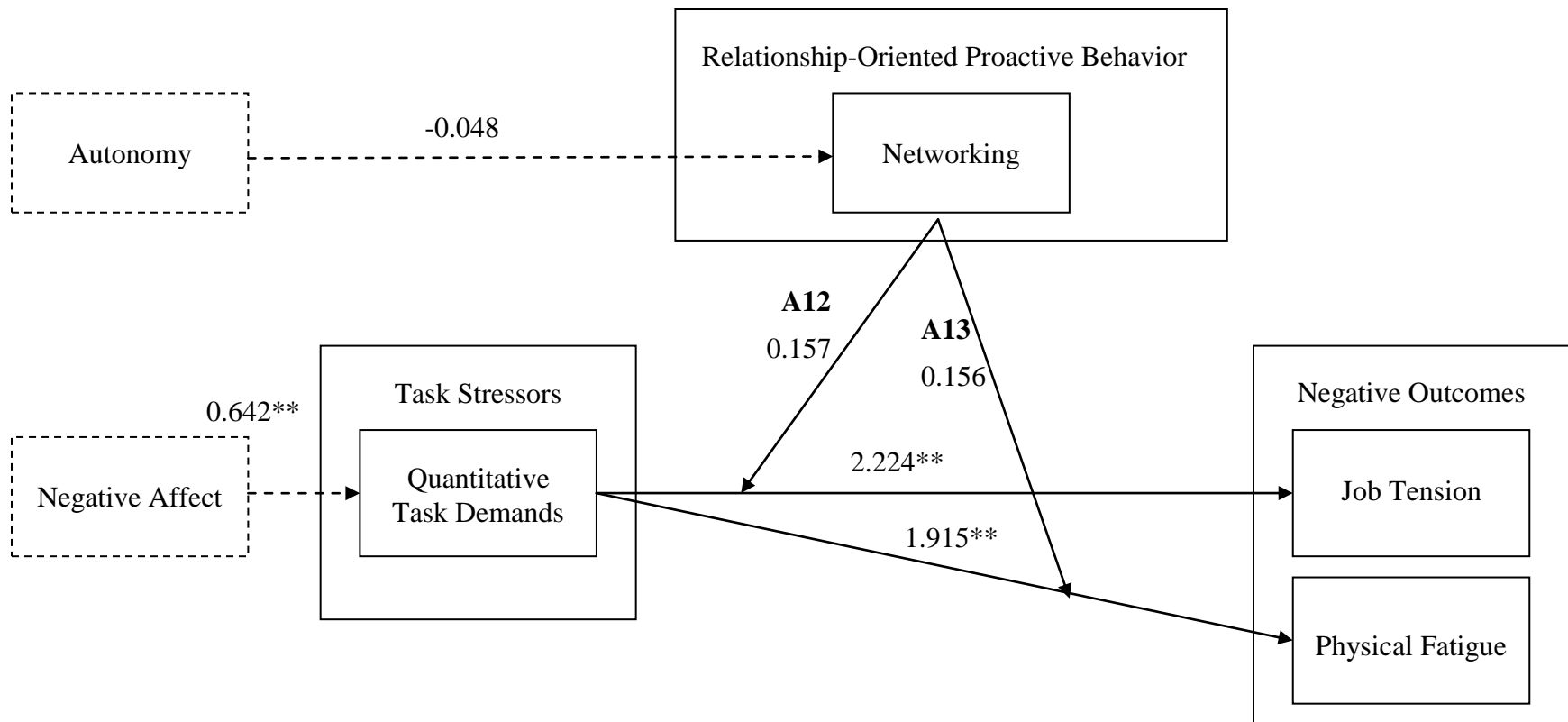


Figure 18

Model 12 – Cognitive-Oriented Model (CA) with Negotiating

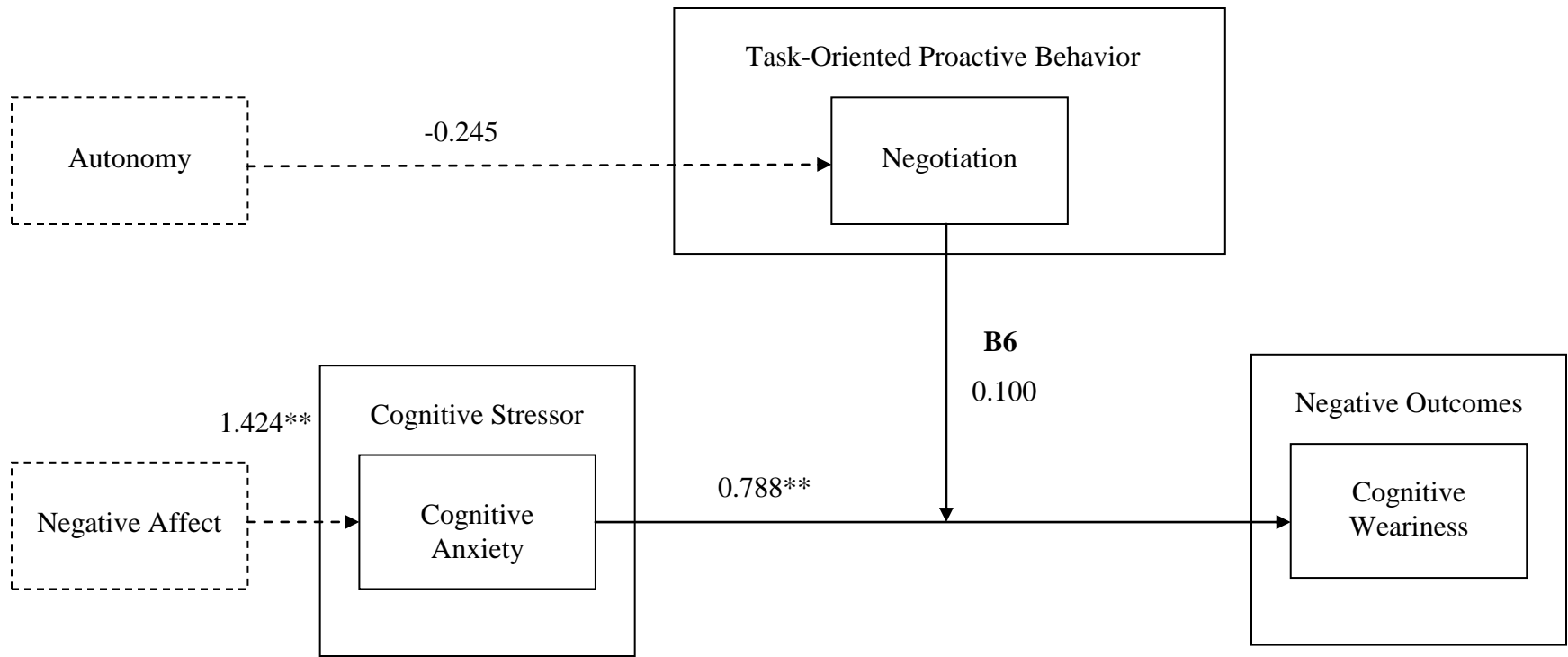


Figure 19

Model 13 – Cognitive-Oriented Model (Worry) with Negotiating

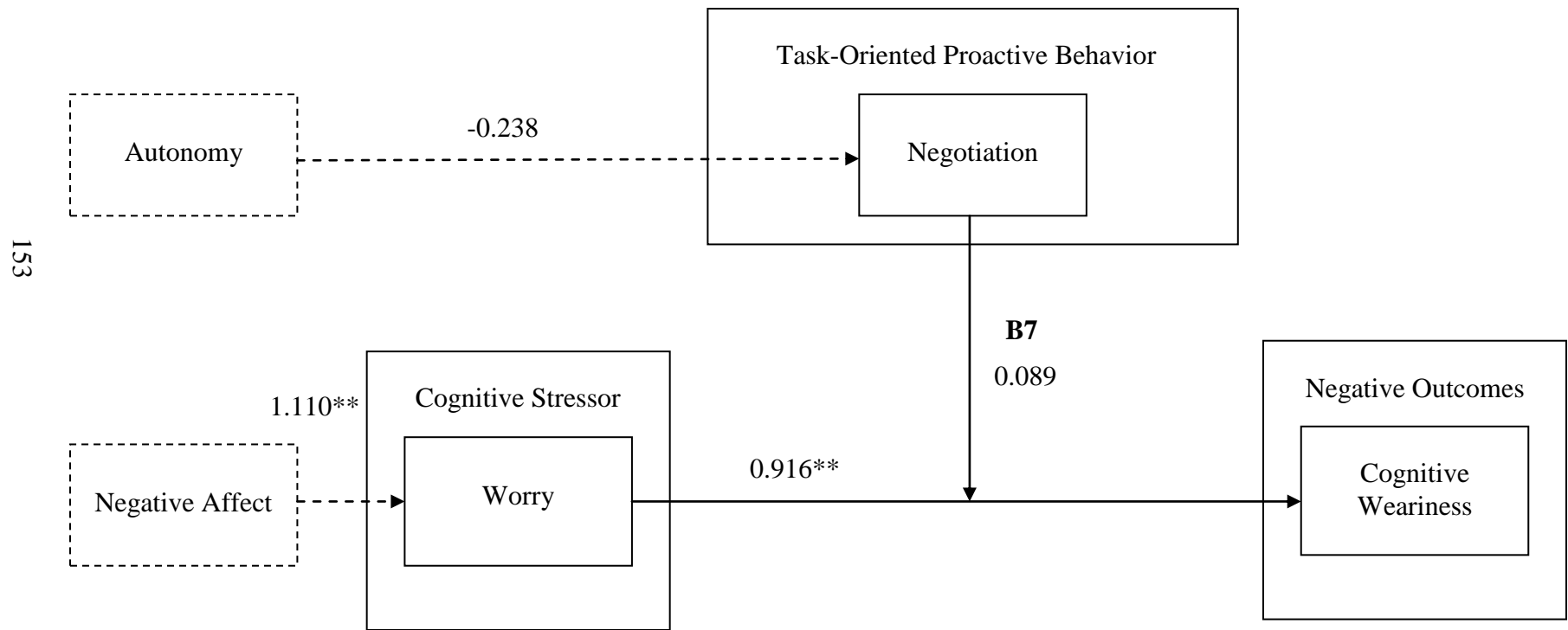


Figure 20

Model 14 – Cognitive-Oriented Model (CA) with Networking

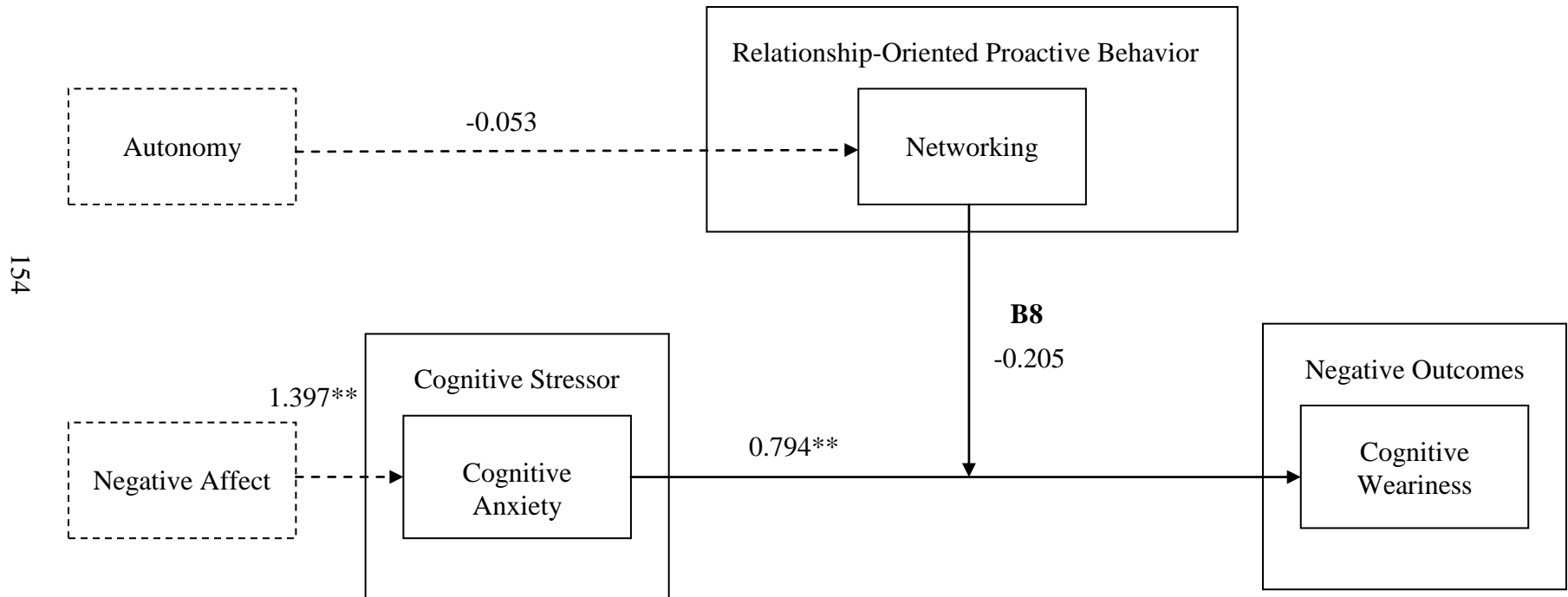


Figure 21

Model 15 – Cognitive-Oriented Model (Worry) with Networking

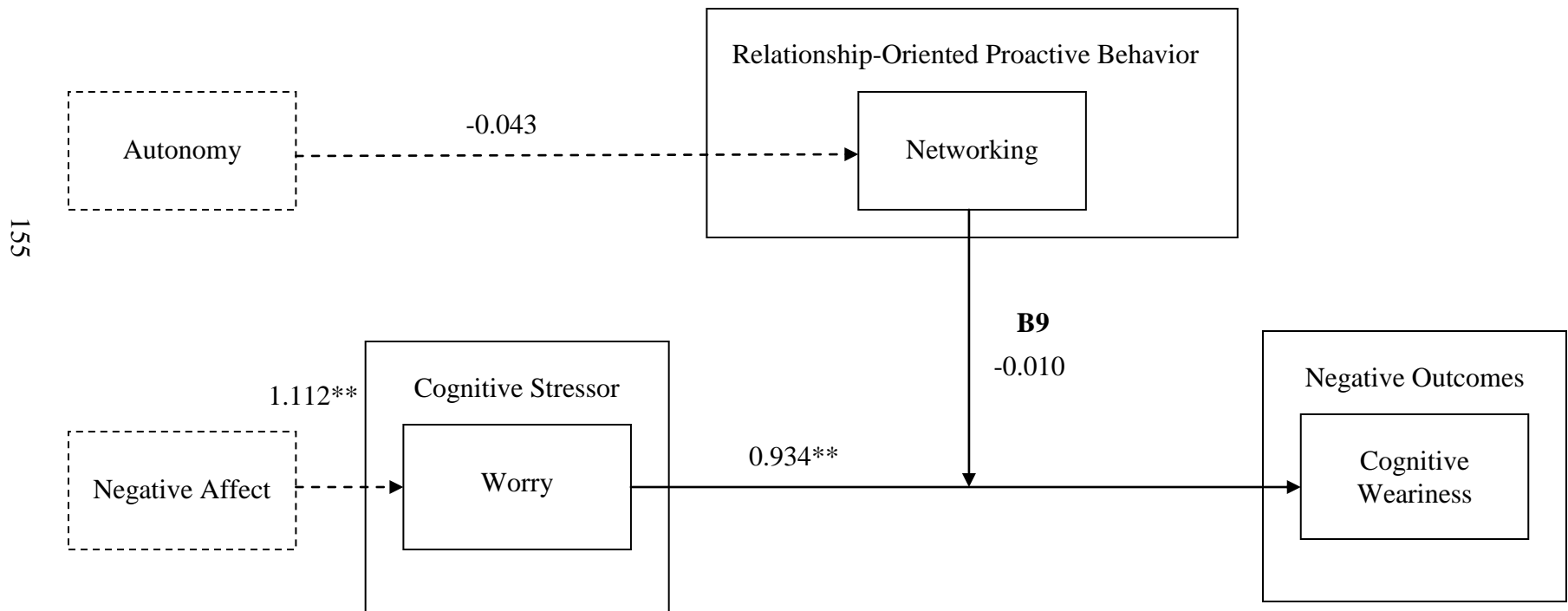


Figure 22

Model 16 – Relationship-Oriented Model with Negotiating

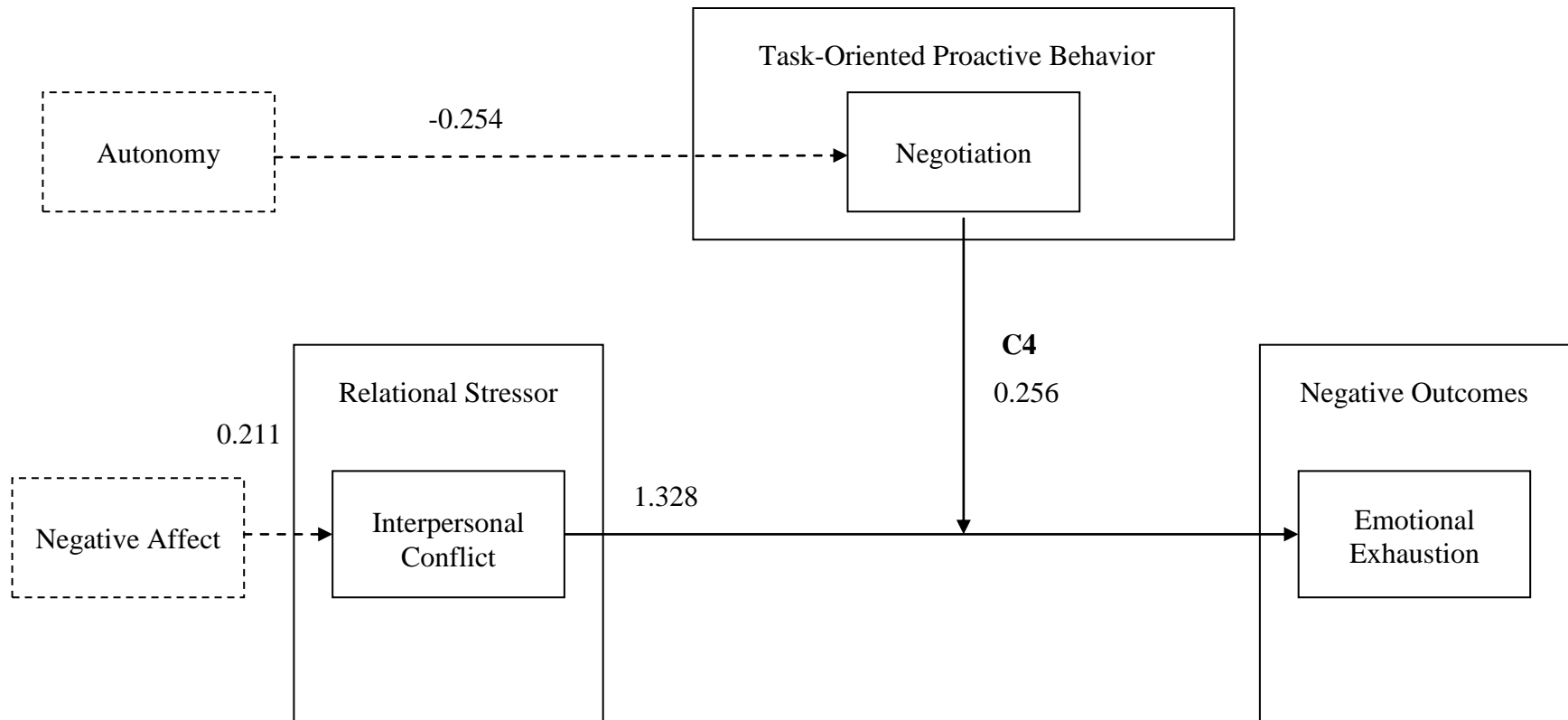
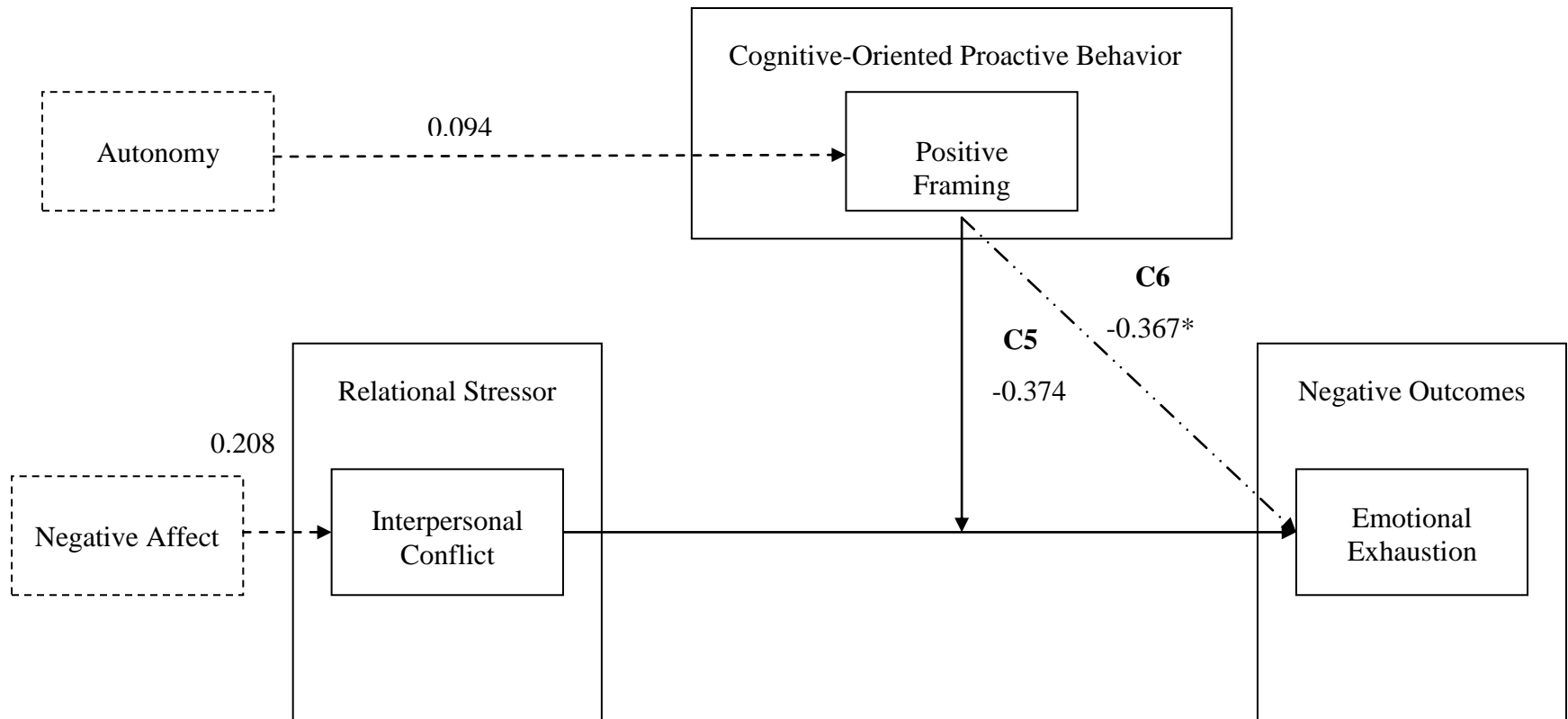


Figure 23

Model 17 – Relationship-Oriented Model with Positive Framing



APPENDIX F

APPENDIX F

PARAMETER ESTIMATES OF COMPETING MODELS

Table 23

Model 8 – Task-Oriented Model (RO) with Positive Framing

Path	Parameter	(β) Coefficient	t-value	p value
10.A1	Autonomy --> Positive Framing	0.080	0.616	0.538
10.A2	NA --> Role Overload	1.205	4.869	0.000 **
H1a	Role Overload --> Job Tension	1.258	5.101	0.000 **
H1b	Role Overload --> Physical Fatigue	1.198	4.120	0.000 **
10.A8	Role Overload x Positive Framing --> Job Tension	-0.080	-0.669	0.504
10.A9	Role Overload x Positive Framing --> Physical Fatigue	-0.170	-1.282	0.200 ¹
10.A10	Positive Framing --> Physical Fatigue	-0.410	-2.318	0.020 *

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

¹ Significant at p < 0.100 (1-tailed)

Table 24

Model 9 – Task-Oriented Model (QTD) with Positive Framing

Path	Parameter	(β) Coefficient	t-value	p value
9.A1	Autonomy --> Positive Framing	0.096	0.702	0.483
9.A3	NA --> Quantitative Task Demands	0.621	5.257	0.000 **
H2a	Quantitative Task Demands --> Job Tension	2.26	3.912	0.000 **
H2b	Quantitative Task Demands --> Physical Fatigue	1.857	3.534	0.000 **
9.A7	Quantitative Task Demands x Positive Framing --> Job Tension	-0.330	-1.064	0.287
9.A8	Quantitative Task Demands x Positive Framing --> Physical Fatigue	-0.467	-1.520	0.128 ¹
9.A9	Positive Framing --> Physical Fatigue	-0.479	-2.170	0.030 *

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

¹ Significant at p < 0.100 (1-tailed)

Table 25

Model 10 – Task-Oriented Model (RO) with Networking

Path	Parameter	(β)	t-value	p value
		Coefficient		
10.A1	Autonomy --> Networking	-0.040	-0.27	0.787
10.A2	NA --> Role Overload	1.242	4.857	0.000 **
H1a	Role Overload --> Job Tension	1.239	5.074	0.000 **
H1b	Role Overload --> Physical Fatigue	1.236	3.964	0.000 **
10.A10	Role Overload x Networking --> Job Tension	-0.103	-0.807	0.420
10.A11	Role Overload x Networking --> Physical Fatigue	0.165	1.147	0.252

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 26

Model 11 – Task-Oriented Model (QTD) with Networking

Path	Parameter	(β)	t-value	p value
		Coefficient		
11.A1	Autonomy --> Networking	-0.048	-0.319	0.749
11.A3	NA --> Quantitative Task Demands	0.642	4.993	0.000 **
H2a	Quantitative Task Demands --> Job Tension	2.224	3.403	0.001 **
H2b	Quantitative Task Demands --> Physical Fatigue	1.915	3.062	0.002 **
11.A12	Quantitative Task Demands x Networking --> Job Tension	0.157	0.536	0.592
11.A13	Quantitative Task Demands x Networking --> Physical Fatigue	0.156	0.587	0.557

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 27

Model 12 – Cognitive-Oriented Model (CA) with Negotiating

Path	Parameter	(β)	t-value	p value
		Coefficient		
12.B1	Autonomy --> Negotiation	-0.245	-1.201	0.230
12.B2	NA --> Cognitive Anxiety	1.424	6.333	0.000 **
H5	Cognitive Anxiety --> Cognitive Weariness	0.788	6.250	0.000 **
12.B6	Cognitive Anxiety x Negotiation --> Cognitive Weariness	0.100	0.383	0.702

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 28

Model 13 – Cognitive-Oriented Model (Worry) with Negotiating

Path	Parameter	(β)	t-value	p value
		Coefficient		
13.C1	Autonomy --> Negotiation	-0.238	-1.919	0.055
13.C3	NA --> Worry	1.110	8.270	0.000 **
H6	Worry --> Cognitive Weariness	0.916	6.875	0.000 **
13.B7	Worry x Negotiation --> Cognitive Weariness	0.089	0.415	0.678

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 29

Model 14 – Cognitive-Oriented Model (CA) with Networking

Path	Parameter	(β) Coefficient	t-value	p value
14.B1	Autonomy --> Networking	-0.053	-0.359	0.720
14.B2	NA --> Cognitive Anxiety	1.397	5.983	0.000 **
H5	Cognitive Anxiety --> Cognitive Weariness	0.794	6.859	0.000 **
14.B8	Cognitive Anxiety x Networking --> Cognitive Weariness	-0.205	-1.214	0.225

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 30

Model 15 – Cognitive-Oriented Model (Worry) with Networking

Path	Parameter	(β) Coefficient	t-value	p value
15.B1	Autonomy --> Networking	-0.043	-0.293	0.770
15.B3	NA --> Worry	1.112	8.285	0.000 **
H6	Worry --> Cognitive Weariness	0.934	7.327	0.000 **
15.B9	Worry x Networking --> Cognitive Weariness	-0.010	-0.058	0.954

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 31

Model 16 – Relationship-Oriented Model with Negotiating

Path	Parameter	(β) Coefficient	t-value	p value
16.C1	Autonomy --> Negotiation	-0.254	-0.770	0.441
16.C2	NA --> Interpersonal Conflict	0.211	0.663	0.508
H8	Interpersonal Conflict --> Emotional Exhaustion	1.328	0.310	0.756
16.C4	Interpersonal Conflict x Negotiation --> Emotional Exhaustion	0.256	0.100	0.920

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

Table 32

Model 17 – Relationship-Oriented Model with Positive Framing

Path	Parameter	(β) Coefficient	t-value	p value
17.C1	Autonomy --> Positive Framing	0.094	0.679	0.497
17.C2	NA --> Interpersonal Conflict	0.208	0.865	0.387
H8	Interpersonal Conflict --> Emotional Exhaustion	1.231	0.527	0.598
17.C5	Interpersonal Conflict x Positive Framing --> Emotional Exhaustion	-0.374	-0.294	0.769
17.C6	Positive Framing --> Emotional Exhaustion	-0.367	-2.404	0.016 *

* Significant at p < 0.05 level (2-tailed)

** Significant at p < 0.01 level (2-tailed)

APPENDIX G

APPENDIX G

POST HOC PATH MODELS

Figure 25

Model 18 - Post Hoc Task Model

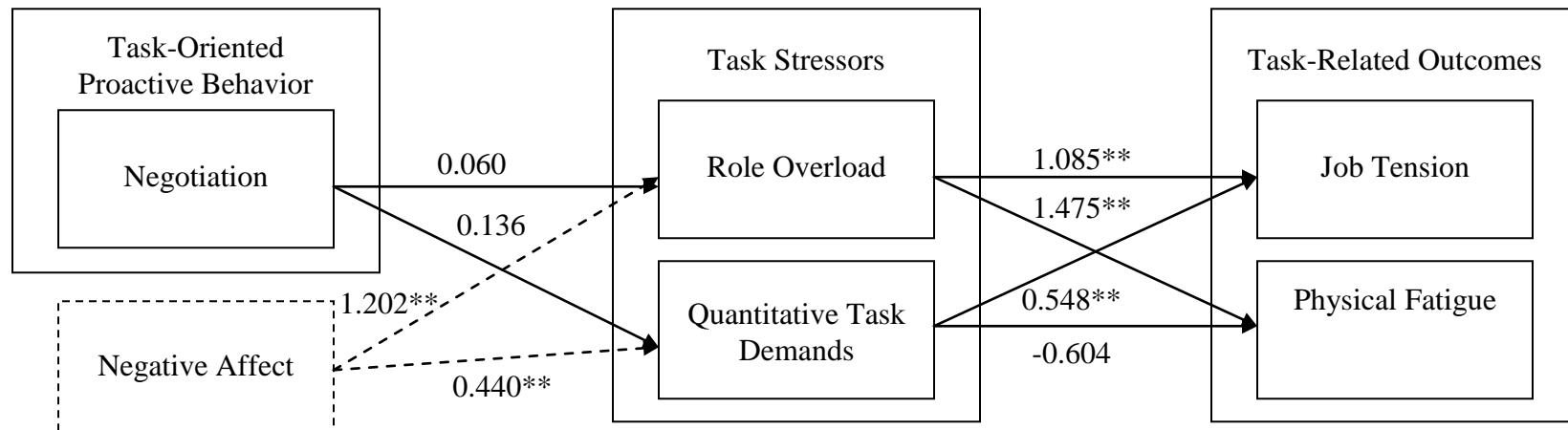


Figure 26

Model 19 – Post Hoc Task Model with Role Overload

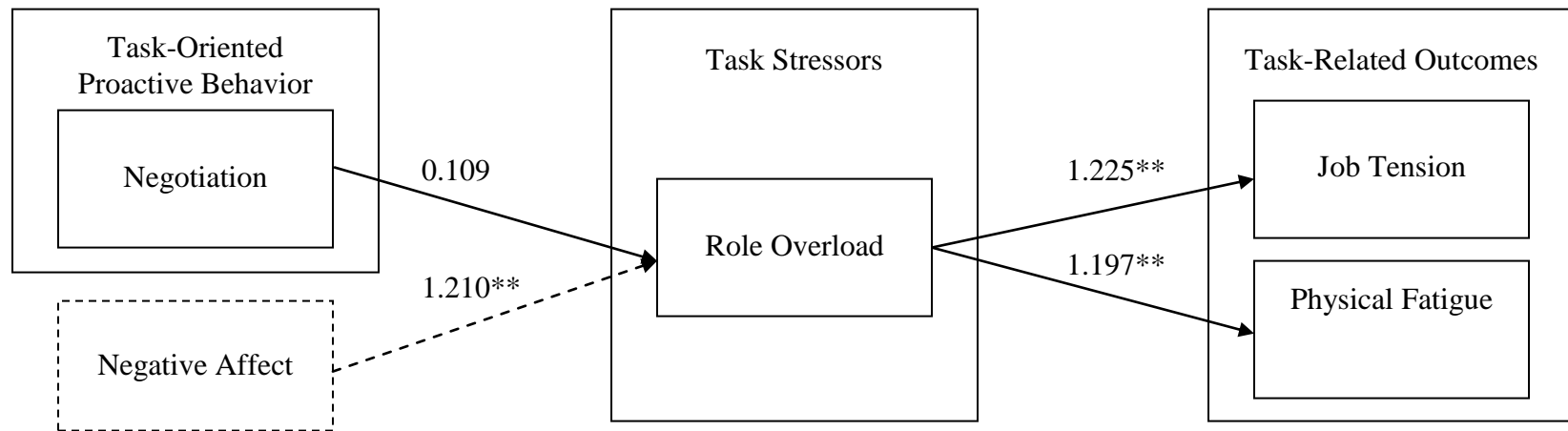


Figure 27

Model 20 – Post Hoc Task Model with Quantitative Task Demands

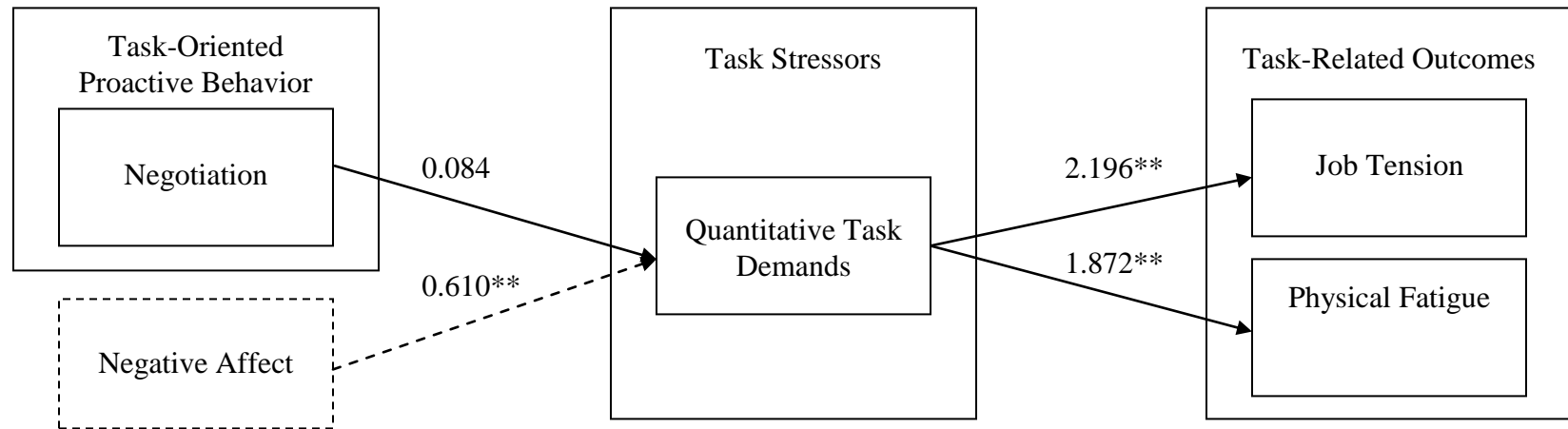


Figure 28

Model 21 – Post Hoc Cognitive Model

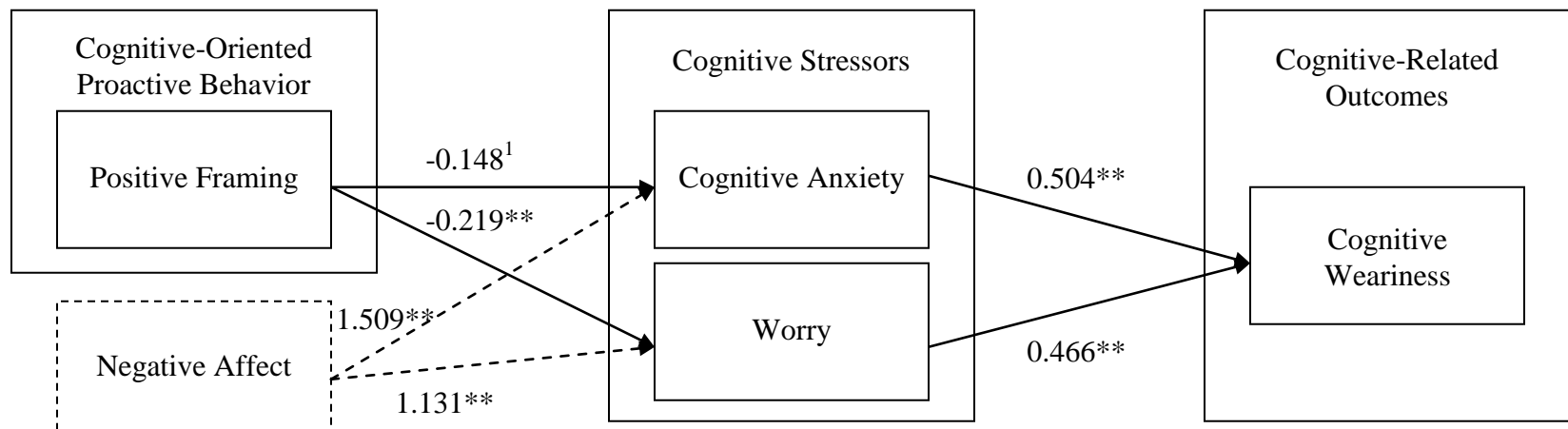


Figure 29

Model 22 – Post Hoc Cognitive Model with Cognitive Anxiety

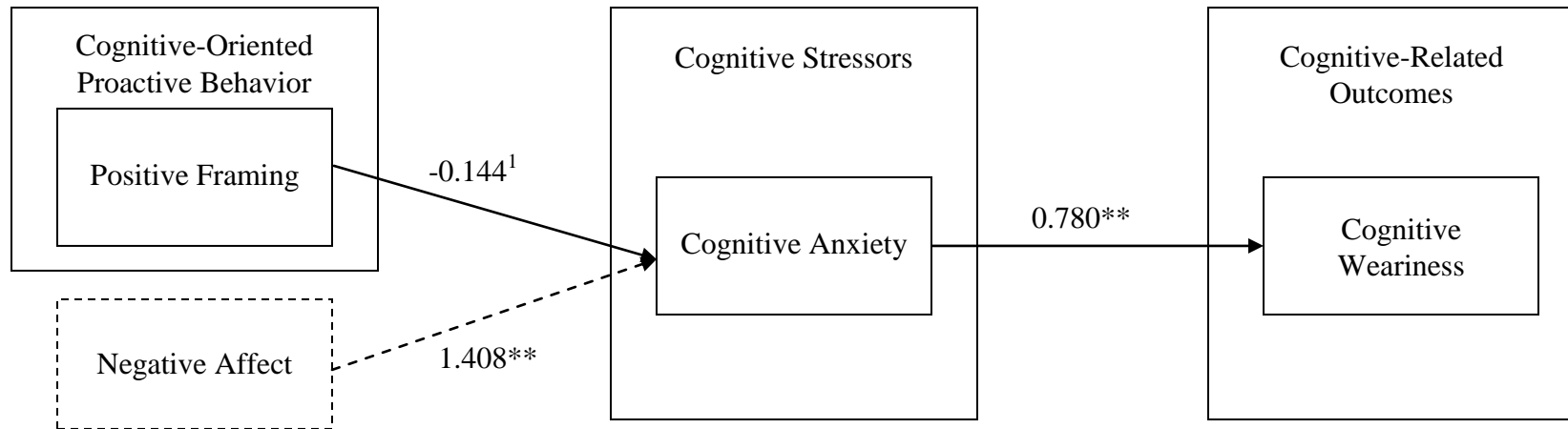


Figure 30

Model 23 – Post Hoc Cognitive Model with Worry

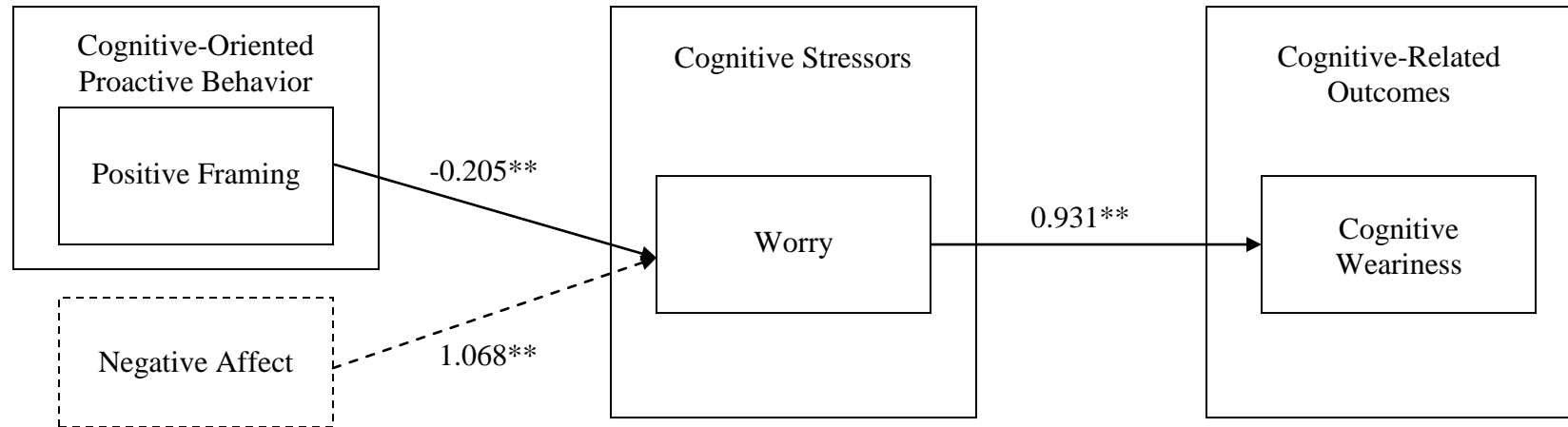
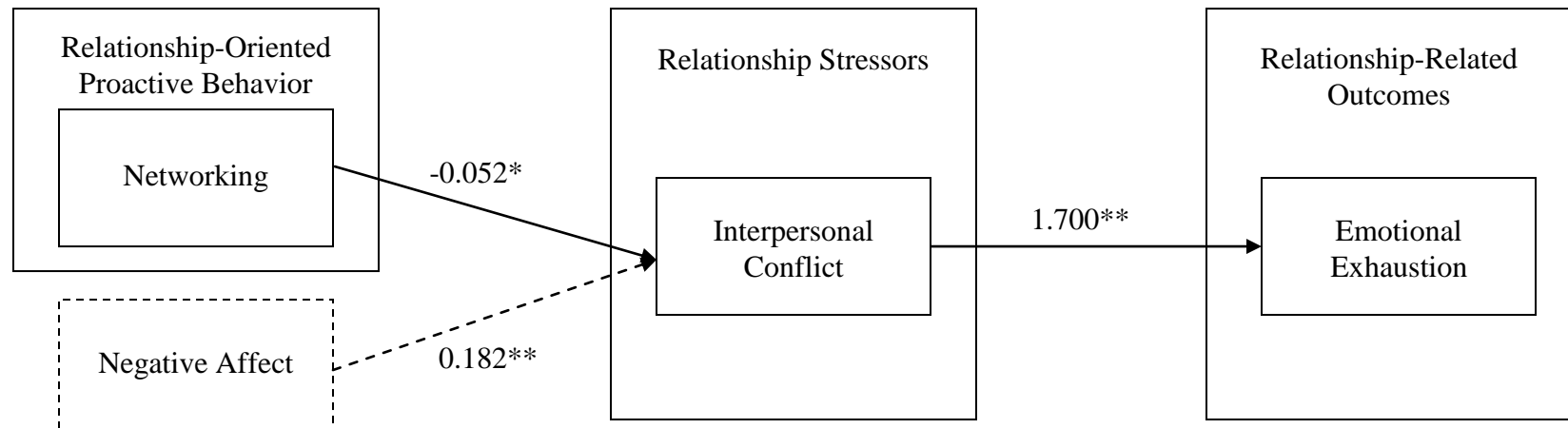


Figure 31

Model 24 – Post Hoc Relationship Model



APPENDIX H

APPENDIX H

FIT STATISTICS AND PARAMETER ESTIMATES OF POST HOC MODELS

Table 33

Post Hoc Task-Oriented Models Fit Statistics

Task Model		Task Model (RO)		Task Model (QTD)	
χ^2	486.267	χ^2	319.806	χ^2	347.761
df	161	df	99	df	114
<i>p</i> -value	0.000	<i>p</i> -value	0.000	<i>p</i> -value	0.000
CFI	0.851	CFI	0.886	CFI	0.882
TLI	0.825	TLI	0.862	TLI	0.859
RMSEA	0.106	RMSEA	0.111	RMSEA	0.106

Table 34

Post Hoc Cognitive-Oriented Models Fit Statistics

Cognitive Model		Cognitive Model (CA)		Cognitive Model (Worry)	
χ^2	286.745	χ^2	174.468	χ^2	182.590
df	125	df	73	df	86
<i>p</i> -value	0.000	<i>p</i> -value	0.000	<i>p</i> -value	0.000
CFI	0.938	CFI	0.946	CFI	0.954
TLI	0.926	TLI	0.933	TLI	0.943
RMSEA	0.083	RMSEA	0.088	RMSEA	0.079

Table 35

Post Hoc Relationship-Oriented Model Fit Statistics

Relationship Model	
χ^2	173.799
df	61
<i>p</i> -value	0.000
CFI	0.901
TLI	0.874
RMSEA	0.1010

Table 36

Parameter Estimates of the Post Hoc Models

Model	Path	Parameter	β	t-value	p-value	
18		Negotiation --> Role Overload	0.060	0.606	0.545	
		Negotiation --> Quantitative Task Demands	0.136	1.430	0.153	
		Role Overload --> Job Tension	1.085	5.142	0.000	**
		Role Overload --> Physical Fatigue	1.475	4.932	0.000	**
		Quantitative Task Demands --> Job Tension	0.548	3.030	0.002	**
		Quantitative Task Demands --> Physical Fatigue	-0.108	-0.518	0.604	
19		Negotiation --> Role Overload	0.109	0.997	0.319	
		Role Overload --> Job Tension	1.225	6.114	0.000	**
		Role Overload --> Physical Fatigue	1.197	5.596	0.000	**
20		Negotiation --> Quantitative Task Demands	0.084	1.299	0.194	
		Quantitative Task Demands --> Job Tension	2.196	6.061	0.000	**
		Quantitative Task Demands --> Physical Fatigue	1.872	5.445	0.000	**
21		Positive Framing --> Cognitive Anxiety	-0.148	-1.583	0.113	¹
		Positive Framing --> Worry	-0.219	-2.927	0.003	**
		Cognitive Anxiety --> Cognitive Weariness	0.504	4.030	0.000	**
		Worry --> Cognitive Weariness	0.466	3.079	0.002	**
22		Positive Framing --> Cognitive Anxiety	-0.144	-1.540	0.123	¹
		Cognitive Anxiety --> Cognitive Weariness	0.780	7.787	0.000	**
23		Positive Framing --> Worry	-0.205	-2.710	0.007	**
		Worry --> Cognitive Weariness	0.931	7.856	0.000	**
24		Networking --> Interpersonal Conflict	-0.052	-2.347	0.019	*
		Interpersonal Conflict --> Emotional Exhaustion	1.700	3.169	0.002	**

* Significant at $p < 0.05$ level (2-tailed)** Significant at $p < 0.01$ level (2-tailed)¹ Significant at $p < 0.100$ (1-tailed)

VITA

Laura A. Williams was born in Nashville, Tennessee, on April 7, 1978. She received a B.S. in Accounting and Management in 2000 and an M.B.A. in 2002 from Lipscomb University. Before beginning her doctoral studies, Laura taught courses in management and accounting at Lipscomb University in Nashville, Tennessee. Prior to her career in academe, she worked as an internal auditor for Hospital Corporation of America.

Laura's research focuses on the antecedents and consequences of occupational stress. Her research examines mechanisms (e.g., felt accountability) which explain employee involvement in citizenship behaviors and experiences of workplace stress arising from work-family conflict. Secondary to this research stream in stress and health is an interest in proactive behaviors. Laura has presented papers at the Academy of Management and Southern Management Association annual meetings. She has also co-authored papers published in *Journal of Applied Social Psychology*, *Social Networks*, and in Volume 6 of Graen and Graen's LMX Leadership book series, *Knowledge-Driven Corporation: A Discontinuous Model*.

The foundation of learning through creation of knowledge in scholarship is also exhibited in Laura's teaching experiences. She has taught classes in Principles of Management, Organizational Behavior, Human Resource Management, Strategic Management, Management Communication, and Principles of Accounting. She values relationships with students and has a passion for challenging students to learn. Her energetic and creative methods of teaching earned her the University of Mississippi 2008-2009 Graduate Instructor Teaching Award. She was also the recipient of the School of Business Administration 2007-2008 Graduate School Achievement Award, recognizing her outstanding research, teaching, and class performance.